

THE SNAKE-POISON

&

VARIOUS OTHER POISONS
HOW TREATED.

BY

P. RAMA KURUP. B. A., L. T.,
Cochin Educational Service.

TRICHUR

THE MANGALODAYAM PRESS.

1931

All rights Reserved

[Price Re. 1]

**DEDICATED
TO
BHARATHA BHOOMI.**

PREFACE.

From time immemorial the art of 'Poison-cure' developed to a great extent in India. This fact is quite clear from the ancient medical works such as *Charaka* and *Susrutha* and so it is a part of the Ayurvedic Science.

During Alexander's time this art found its way to Europe. When Alexander, during his conquest of the then world, reached India and was fighting with Porus many of his soldiers died of snake-bite. His physicians were quite ignorant of the antidotes for snake-poison. He was in a despondent state, and thought of returning home without accomplishing his object. But before he did so, he made enquiries and got the services of the Indian physicians. With their help in this direction, he continued his fight with Porus and conquered him. On his return, he took some of the physicians with him and they were amply rewarded.

It seems that the physicians in Malabar were even more proficient in the art of curing snake-poison, for, Malabar is a land of snakes. Hemmed in, as the hilly country is between the Arabian Sea and the Western Ghats, it is a land of snakes, so

much so that the proverb of the land "For one cubit length of land, there would be a snake of two cubits' length" holds good even now. Much more must it have been true in times of yore. On account of the fear of snakes, in almost every house there is the custom of worshipping snakes and in almost every compound of a wealthy and pious family, a small grove is set apart for snakes. There, offerings are offered to the snakes at least once a year and they are propitiated. If this is not done regularly, woe to that family! Such is the belief.

If a snake of Brahmin variety is killed by any one, there would be *Naga-kopa*, anger of serpents, and he and his family would be subjected to various incurable diseases such as itches and leprosy. Therefore to ward off the effect of snake-poison without hurting snakes, the physicians exerted themselves to the study and practice of the art of Poison-cure.

It appears that originally, in Malabar, the physicians engaged in the cure of Poison studied seven books treating about it. They are *Narayaneeyam*, *Udveesam*, *Utpalam*, *Haramekhala*, *Kalavanchanam*, *Lakshanamritam* & *Ashtangahrdayam*. They are all written in Sanskrit. These physicians,

on account of their conservatism, kept this science as sacred and secret. Only qualified persons in high caste were instructed. So in course of time the number of persons who studied this science became reduced. Books also were lost through the depredation of white ants and hence became rare. With the neglect of Sanskrit study by the generality, the number of physicians was still reduced. Some are even now very zealous in keeping the books without lending them to others, though they themselves do not care to study them. Another weighty reason for neglecting the study of this part of the Ayurvedic Science is that it is not paying. The physicians are enjoined not to expect, demand or accept any reward for their kind actions. There was no encouragement either from the public or the Government. Besides, the physicians would have to spend from their pockets. As such, even those who study the *Ashtangahrdaya* of *Vagbhata* generally wilfully neglect the study of the chapters dealing with the "Poison-cure". But there is a tendency, at the present time, to revive the study.

When the neglect of the study of the Science in Sanskrit had been evident even in early times, kind physicians who were scholars also were not wanting. They, out of sympathy for the sufferings

of the others, composed books treating about the 'Poison-cure' in the vernacular (Malayalam) and in rhymes, epitomising the Sanskrit works. The one named *Jyotsnika* is such a book — the best work in Malayalam. It is a direct translation of certain portions of *Narayaneeyam* and *Lakshanamritam*. It is composed by a certain physician-poet named Narayana. As he was a practical man, he, in his book describes only such effective medicines as could be easily procured by the people of India — especially of Malabar.

It appears that many works in Malayalam language sprang up after him. '*Darsanachandrika*' is such a one — which has not yet been printed. There are numerous other works—some with names, e. g., *Ariyannoor Bhasha*, *Thoovennilavu*; and others, nameless — written in different kinds of metres. But almost all of them are more or less incomplete and they appear to contain matters dealt with in *Jyotsnika*. The last of the work *Prayogasamutchaya* recently compiled by His Highness Kochunni Thampuran of the Cochin Royal family, a living authority on 'Poison-cure', is a judicious selection from almost all the available Malayalam works printed hitherto and unprinted and also from portions of Sanskrit works translated.

The author of the present volume has taken *Jyotsnika* as his text — thereby making the study of this work serve as an introduction to the study of *Lakshanamritam* and *Narayaneeyam*. He has also written “A comparative study of *Lakshanamritam* and *Jyotsnika*” — which would be perhaps useful only for the Sanskrit-knowing Malayalam public.

I have ventured to publish this book in English solely with the belief that the English-knowing public speaking various vernaculars would be instrumental in doing good service to the people suffering from Poison. A book treating about ‘Poison-cure’ in any *one* vernacular, such as Malayalam, could be advantageously used only by the people knowing that language. But it is my wish that this book may be useful for people speaking different vernaculars. The medicines are chiefly given their Latin or Botanical names in the body of the book. The common names of certain medicines such as could be known even to a layman are given in English. At the end of the book the botanical names of medicines with corresponding names in Sanskrit, Hindi, Malayalam, and English are given. No doubt, in certain cases I have been handicapped for not knowing the corresponding names of certain herbs in Latin and other vernaculars. In such places I have retained the Sanskrit

and the Malayalam names. I crave the indulgence of the worthy public to enlighten me on such matters.

If this humble work, solely undertaken by me as an amateur to serve human beings and the cattle suffering occasionally from snake-poison and other poisons, such as that of cats, rats, dogs, scorpions, hornets etc. becomes useful in that direction even to a slight extent and serves as an introduction to the intensive study of certain Sanskrit works such as *Lakshanamritam*, *Narayaneeyam*, *Kalavanchanam* etc. and to the practice of 'Poison-cure', I shall feel highly repaid. I have already undertaken to bring out the ancient work of *Lakshanamritam* to the English-knowing public. In addition to such study, if this work provokes the thoughts of Scientists to do original research work in the composition of medicines in relation to the various kinds of Poisons, I shall be doubly rewarded. With this thought I dedicate this work to my mother, Bharatha Bhoomi.

I cannot close this Preface without bending my knees at the holy feet of my revered teacher, His Highness Veera Kerala Varma, the First Prince of Cochin. I pray to him to shower his blessings on me so that this work might become useful to people.

P. RAMA KURUP.

CONTENTS.

PAGES

CHAPTER 1

1—14

Introduction

Kinds of Poisons

Life history of snakes

Mythological origin

Divisions found on earth

Conception and procreation

The food of snakes

Their dwelling places

Their enemies

Causes of snake-bite

Symptoms of snake-poison

Fangs

Course of Poison

Symptoms of impending death

Symptoms proving actual death

CHAPTER 2

15—31

Inferences from messengers

Upasruthi

Ill omen and good omen

CHAPTER 3

31—39

Weights and measures

Dosage

Methods of preparing medicines

39—44

CHAPTER 4

For poison of the hooded-variety

Lepa

Lepa and Pana

Pana

Anjana and Nasya

CHAPTER 5

45—63

For the Poison of the Mandali (vipers)

Lepa

Lepa and pana

Nasya, Anjana

Prescriptions for various other ailments

To disperse swelling

Oils to heal the ulcer

CHAPTER 6

63—69

For the Poison of the Rajila variety

Lepa

Pana

Lepa and Pana

Anjana, Nasya

Headache

CHAPTER 7

69—74

Thoya dhara

Bath and Diet

Things to be avoided

Effect of improper treatment

CHAPTER 8

74—84

Rat-poison

How it enters the body

What ought to be done at once

What ought to be done within 36 hours

What ought to be done later on

For loss of appetite

To disperse the swelling

Decoctions for all kinds of Rat-poison

Medicated oils for Rat-poison

Treatment for chronic Rat-poison

CHAPTER 9

84—103

1. Scorpion-poison and its antidote
2. Spider-poison do
3. Mongoose-poison do
4. Cat-poison do
5. Dog-poison do
6. Horse-bite do
7. Monkey-poison do
8. Human-bite do
9. Frog-poison do
10. Green House-lizard poison do
11. Chamelion do

- | | | |
|-----|-----------------------------|----|
| 12. | Lizard-poison | do |
| 13. | Hornet-sting | do |
| 14. | Millipede-poison | do |
| 15. | Ear-snake poison | do |
| 16. | Leech-poison | do |
| 17. | Wasp or beetle or bee-sting | do |
| 18. | Centipede-poison | do |
| 19. | Crocodile-poison | do |
| 20. | Fish-poison | do |

CHAPTER 10	103—108
------------	---------

Stavara-poison and its antidote

Special antidotes for certain plant-poisons,
mineral-poisons and other objects

CHAPTER 11	108—110
------------	---------

Treatment for Cows

CHAPTER 12	110—124
------------	---------

A general treatment for all kinds of Poisons

CHAPTER 13	124—133
------------	---------

Certain other prescriptions

ERRATA

PAGE	LINE	WORD OR WORDS	CORRECTED
15	8	dav	day
24	16	folloing	following
34	7	grouud	ground
38	9	7 ¹ drachams	7 ¹ / ₂ drachms
39	7	boild	boiled
"	15	administring	administering
43	1	Stimulants	stimulants
"	25	Bibborax	Bi borax
44	16	Lencus	Leucus
47	21	cheloniodes	chelonioides
48	2	soverign	sovereign
"	24	use	used,
49	13	Lencus	Leucus
50	5	ends	used
"	11	Sanctuum	sanctum
52	19	Through	through
"	24	throught	throughout
56	5	Acacia —	Acacia
58	4	soveing	sovereign
"	7	soverign	sovereign

PAGE	LINE	WORD OR WORDS	CORRECTED
60	12	continouously	continuously
"	20	inl	in
"	22	al	all
67	12	asafoetida	asafoetida
85	16	Pongamai	Pongamia
88	21	Stramonrium	Stramonium
96	2	Symptmos	symptoms
99	26	Tincoria	Tinctoria
108	2	soulution	solution
112	21	-idg	-ing
114	16	Azadiraheta	Azadirachta
115	3	Minmusops	Mimusops
118	21	Embelica	Emblica
119	10	Tabernoemontana	Tabernaemontana
122	13	Ptery-gosperma	Pterygosperma
124	16	Chapter 12	Chapter 13
128	10	seive	sieve
131	1	envolucrata	involucrata
"	14	andstopes	and stopes

THE SNAKE-POISON

AND

VARIOUS OTHER POISONS

HOW TREATED.

CHAPTER 1.

INTRODUCTION-KINDS OF POISONS-LIFE HISTORY OF SNAKES- VARIOUS MATTERS CONNECTED WITH SNAKE-POISON.

Poisons treated of in this small volume are of two kinds — the *Jangama poison* and the *Stavara poison*.

The *Jangama poison* is the poison that originates from various reptiles, animals and insects. The chief among these creatures are snakes, rats, scorpions, spiders, mongooses, cats, dogs, jackals, horses, monkeys, human beings, frogs, the green house-lizards (*Lacerta Interpunctula*), chamelions, lizards, hornets, millipedes, wasps or beetles, the fish, crocodiles, tigers, centipedes, ear-snakes and the leech.

The *Stavara poison* is the poison from the various parts of different plants. To mention a few, the fruit of *cerbera odollam*, the flower of tobacco and Dhatura, the leaf of tobacco and *nux vomica* tree, the root of *Aconitum heterophyllum* and *Plumbago rosea*, the tubers of *Gloriosa superba*, the seed and the bark of *nux vomica* tree and the exudation of *Papaver somniferum*, known as opium, are all poisonous.

Of these poisons the Snake-poison, being rapid in its action, deserves to be treated first.

THE LIFE HISTORY OF SNAKES:-

THE MYTHOLOGICAL ORIGIN:-

According to the Hindu mythology there are eight chief serpents (Ashta-nagas). They are called *Ananta* and *Gulika* belonging to the Brahmin caste; *Vasuki* and *Sankhapala* belonging to the Kshatriya caste; *Thakshaka* and *Mahapadma* belonging to the Vysya caste; and *Padma* and *Karkotaka* belonging to the Sudra caste. These had numerous issue. *Garuda*, the son of *Vinata*, was an enemy of the snakes and so he killed most of them. The eight chief serpents took shelter in different places and some of them came to the earth also. The snakes that are seen on the earth are but the issue of those that came here.

From this story what we ought to infer is that there are different kinds of snakes on the earth; that their nature also is different, and that *Garuda* (the white-necked kite) is their enemy. So the physicians in the cure of poison, worship *Garuda* even now and pray to him before they begin the cure of poison.

The snakes seen on the earth may be classified into four chief divisions, viz., *Darveekara*, *Ghonasa*, *Rajila* and *Vendira*.

The *Darveekara* or *Moorkha* is the hooded variety, cobra. It is said that there are twenty six species under the genus *Darveekara*. They are all characterised by the different kinds of hoods marked with dots and lines and by their looks and hissing. They can move very quickly. Among the *Tridoshas* (*Vatha-pitha-kapha*) upon which theory the Indian Ayurvedic medical science is built, the poison of "the hooded variety" agitates the *Vatha* more predominantly.

The *Ghonasa* or *Mandali* variety is comparatively short in length and it has no hood. It is of sixteen different species. It has "Mandala" i. e., circular spots throughout the surface of its body. It cannot move quickly. Its poison has the effect of deranging the *Pitha* humour (*Bile*) the more.

The *Rajila* variety has on its body, lengthwise and breadthwise, many lines. There will be an oily appearance also on its body. It is of thirteen kinds. It has no hood, but it can move quickly. Its poison has the power of agitating the *Kapha* (phlegm) more predominantly.

The fourth variety called *Vendira* is of twenty-one kinds. It is a hybrid of the other three varieties and as such its poison will produce symptoms of the parent varieties.

It is said that snakes have no ear and that their eyes have the power of receiving sounds.

The tip of their tongue is slit into two. The snakes are easily excitable.

CONCEPTION AND PROCREATION.

The period of three months — from the middle of July to the middle of October — is the period of conception by the female serpent. At the end of four months, it will lay an aggregate of 21 eggs, i. e., three groups of seven eggs each at three different places somewhat close by. Each group will contain eggs of red colour, yellow colour and also a mixture of the two. The red-coloured eggs are females; the yellow ones, males; and the eggs of mixed colour, eunuchs. The mother serpent

will be always guarding them. At the end of 15 days, the eggs will burst, and the young ones will emerge. Their bodies will be five inches long and of red colour; and their heads, black. It is said that the mother-serpent will eat all of them except three. Of these three, one will be a male, another, a female, and the third one, an eunuch. At the end of seven days, these young ones will open their eyes. After five days more, they become aware of their own existence. At the end of twenty days from this period, they will have thirty-two teeth. Of these, four are poisonous fangs — two on the left side and two on the right. The two fangs on the left side, one in the lower jaw, and the other in the upper one, are *Karali* and *Makari* respectively; and the two on the right, *Kalarathri* and *Yamadoothika*. Within a month these fangs will possess the poisonous effect, *Karali* having the minimum effect, and *Yamadoothika*, as the very name "The Messenger of Death" implies, possessing the maximum effect; for, the sacks behind these fangs contain 1, 2, 3 and 4 drops of poison respectively, each drop being as big as a pea, ready to be injected. Then these young ones will be going in the company of their mother for some period. Within six months, they will be leaving

their mother. After six months they will be one cubit long and they begin to cast off their slough.

The hybrid variety *Vendira* has no particular period for its conception or procreation.

THE FOOD OF SNAKES.

The food of snakes varies according to the four castes to which they belong. All Brahmin serpents will eat, according to the Hindu mythology, air alone or fragrant, sweet and soft flowers also. The Kshatriya variety will eat rats, and drink milk and dew-drops. The Vysya variety will be subsisting on frogs, flesh and saltish substance. The Sudra snakes will eat whatever they get. It is said that they have no definite principle in eating.

THEIR DWELLING PLACE.

It will not be amiss if we try to understand the dwelling place of each variety of snakes, the places where they frequent, and the time of their frequentation; for, these factors, in a way, will determine the nature of the snake which inflicts wound. Knowing the kind and nature of the snakes will help us, to a certain extent, in determining the antidote to be administered.

The Brahmin variety of serpents will be generally residing in places where there is a hidden treasure, or in rooms where grain is stored. They live also in mountains and forests where people do not molest them. They are also said to live in temples, in old deserted buildings and also on sacred trees such as *ficus Religiosa* and *Palasa* tree (*Butea Frondosa*). They would be rambling only in the morning time.

The Kshatriya serpents would be living in the holes of mouldering walls of old forts ; on certain holy trees such as cluster fig (*ficus Glomerata*), Banyan tree (*ficus Benghalensis*) tamarind tree (*Tamarindus Indicus*), Terminalia Arjuna and *Simsapa* tree ; near lotus flowers, and also on chariots which would be used only occasionally. They would be coming out of their dwelling place at or about noon without any fear.

The Vysya serpents reside near streets; on trees having thorns (e. g. *Erythrina Indica*, *Eriodendron Aneractuosum*) ; near the yard around the houses ; and also in the wells. They will be moving about at dusk.

The Sudra serpents, having no special liking for any particular place, will be living at any

convenient place. They will come out of their dwelling places during night time.

All the varieties will be living in deserted ant-hills if they get the opportunity to do so, and all kinds will be going out of their dwelling places at all times to enjoy the sweet fragrance of earth when the first rain falls.

THEIR ENEMIES.

The snakes are not without their natural enemies. Lightning, pea-cocks, cats, boars, wolves, the mongoose, vultures, and the magpie are their natural enemies. If they are not destroyed by them, they may live for 120 years.

CAUSES OF SNAKE-BITES.

The causes of snake-bite will also, to a certain extent, determine the gravity of the poison. These causes are various. Snakes may bite on account of fear. The poison of these snakes is not dangerous. When the snakes get exhilarated, then also they may bite. Such bites are extremely dangerous. Death is the final result. Thirst and hunger will prompt them to inflict wounds which are dangerous. The mother-serpent which is guarding its eggs will bite, thinking that its young ones would

be destroyed. A snake when touched will bite. Thinking that an object is its food, it may bite. When it can no longer endure the irritation caused by the increased secretion of poison, it will bite. This also is very dangerous. A serpent which owes some grudge may bite. This biting will deal instantaneous death. An angry serpent's bite is dangerous.

The bites of snakes for any other reason — excepting those mentioned above — are not dangerous, and so they can be easily cured. To mention a few instances, the poison of the venomous snakes will be much lessened when they are in water. The serpent which is frightened, which is tired as a result of mating, which has run to a distant place, which has somehow escaped from a fight with a mongoose, which has had its food such as frogs, or which was lying for a long time under certain plants or shrubs which can be used as antidotes for poisons, is not so poisonous as otherwise it would be.

SYMPTOMS OF SNAKE-POISON.

From the wound inflicted by a snake blood must come out at least to a very slight extent. Though this fact may not be discernible to the

naked eye, a lens may reveal it. Then the wound may be suspected to be poisonous. In addition to this blood, if the person feels a heaviness on that part, an itching and a burning sensation, if there is swelling and a sensation as if an ant bites and it goes up from the bitten part, then certainly the poison has entered the wound.

A feeling of heaviness throughout the body, tiresomeness on the limbs, the hair standing on ends and sleepiness make it clear that the venom has entered the circulatory system.

The wound inflicted by *Darveekara*, i. e., the hooded variety, will be of black colour, dry and rough (i. e. not oily). The poison will enter the system quickly and *Vatha* will be deranged. Severe pain, especially at the joints, is the result of *Vatha-kopa* i. e. the derangement of the humour *Vatha* (air).

The wound inflicted by *Ghonasa* or *Mandali* variety is characterised by swelling, burning sensation and yellow or yellowish tinge. There will be *Pitha-kopa*, and, as a result, a feeling of burning throughout the body, and various other ailments such as fever, headache, thirst, vomitting, retention of urine etc, occur.

That inflicted by *Rajila* variety is characterised by white colour, swelling, flow of clotted blood and a feeling of coldness. The person would be shivering from cold and *Kapha* i. e. phlegm will be deranged.

The wound inflicted by *Vendira* will have the symptoms of a mixed nature.

FANGS.

It has been said that there are four venomous fangs — the two called *Karali* and *Makari* on the left and the two, *Kalarathri* and *Yamadoothika* on the right. The nature of the wound inflicted by each of these will help us to know the degree of poison and hence the impossibility or otherwise of the cure.

The wound of the *Karali* fang is like the hoof of the cow, the smell is like that of *Aguru* (*Aquilaria Agallocha*); the degree of poison is not much.

The wound of *Makari* is like a bent bow; the odour is like that of the unctuous secretion of the civet cat; the poison can be cured easily.

The wound of *Kalarathri* is like the foot of a bird. It has the odour of sandal paste; the poison, with difficulty, can be cured.

The wound of *Yamadoot hika* will have swelling; it will have the smell of milk. Bluish blood will ooze out from the wound. The poison is said to be incurable.

The season of the year, the period in the day or the night time and the age of the snake also can give a clue as to the degree of poison. Thus, the *Darveekara*, the *Ghonasa* and the *Rajila* varieties have more poison in the rainy season, the dewy season and the summer season respectively.

During seven days at the beginning and the end of any season, snakes are more poisonous.

For the first four hours in the morning i. e. from 6 a. m. to 10 a. m., the tender-aged, for the next four hours, the middle-aged ones; and for the last four hours in day time, the aged ones; have more poison.

In the night time also, snakes are more poisonous in the above order.

The hybrid variety, *Vendira*, is more poisonous at all times.

**GENERAL REMARKS AS TO THE NATURE OF THE
COURSE OF POISON:—**

All living bodies are made up of *seven Dhatus*. From the outside of the body to the interior they

are in order, skin, blood, flesh, fat, bone, marrow and semen (*sukla*) pervading throughout the body. When the poison enters each of these *Dhatus*, it will produce different symptoms. It is the duty of the physician to understand which *Dhatu* the poison has reached before he decides on the nature of the antidote.

When the poison pervades the skin, the hair will be standing on end; when it pervades the blood, there will be much sweating; when it reaches the flesh, there will be change of colour; when it is in fat, there will be shivering and vomiting; in bone, the vision becomes dim and the neck loses its power of holding erect; in marrow, there will be hiccough and deep breath; and in the seventh *Dhatu*, there will be fainting and even death will take place.

But when a person faints as soon as he is bitten by a snake, the swooning is due more to the shock and sudden fear than to the poison. Such cases should never be given up.

THE SYMPTOMS WHEN DEATH IS ABOUT TO TAKE PLACE.

The body will perspire often; functions of the organs of sense become weak; there will be shivering; joints become weak; the mouth becomes

parched ; there will be deep respiration and pain in the chest ; the person vomits phlegm and a yellow liquid ; nails and teeth become blue in colour ; the tongue and the lips blacken ; outer corners of the eyes become red ; the patient speaks incoherently through the nose ; and the wound, i. e. the part bitten, becomes swollen, round and red mixed with blue colour.

When anus, eyes and mouth remain open, and when, at the same time, excreta and urine are passed ; and when "the black" of the eyes (Iris) remain fixed in the middle of the eyes, death has already taken place. If the hair sticks on to the skin when wetted and does not rise up even when the skin becomes dry, death has taken place. When no mark of beating is observed on the fleshy portion, say thigh, on striking with a cane or stick, or, when no blood is seen flowing when an incision is made on the skin of the forehead or if at all, the blood is venous and small in quantity, or, if the body when placed on water floats on it, the conclusion that the body is dead may be arrived at.

CHAPTER 2.

INFERENCES TO BE DRAWN FROM MESSENGERS.

No treatise on "Poison-cure" is considered complete without a chapter which deals with rules as to the inferences to be drawn from the words, postures and actions of the messenger who comes to the physician with the news of the fact that a person has been bitten by a snake. The physician then understands from him the time of the day, the day of the week and the place where the event occurred. He calculates in his mind the *Ayana*, *Nakshatra*, *Thithi*, *Vàra* and certain conjunctions of these called *Dagdhayoga* and *Mrityuyoga*. (These terms will be explained later on.) From these also he draws his inferences as to the caste of the snake, the degree of poison and whether it is curable or incurable. Any physician will have to observe these rules when a messenger comes with the news of illness — but these are specially observed by the specialists that are engaged in the cure of poison. Such physicians should never receive any remuneration for the kind services that they do for the welfare of living beings. This is not a mere theory found in books alone. My teacher, I may say in

passing, never received anything in return for his services, though he has most of the medicines ready with him. He keeps a botanical garden also containing the rare medicinal herbs that are to be used then and there.

Though the set of rules that are to be mentioned below cannot be directly proved and the why and wherefore of these rules cannot be demonstrated, they have been verified very often empirically and they are also capable of verification in future when individual cases come up.

To give an exhaustive list of the rules is not my intention, but certain salient ones are given below:—

From the qualifications of the messenger the curability or otherwise of the person bitten by a snake can be inferred. If the messenger is clean in person, or if he has on clean white dress, or if he wears white flowers; or if he is not dejected, and speaks the matter directly and clearly without mumbling; or if he is clever and belongs to the same caste and sex as the bitten person, then he indicates that the poison can be cured.

On the other hand, if the messenger does not enter through the proper path to the physician's

residence; or if he wears a black or red dress, or a black or red flower; if he has a weapon or stick or cord in his hand; if he has smeared his body with oil; if he speaks hurriedly and with words choked in his throat; if he crosses his hands or legs; or leans upon a dry wood; or wears wet cloth; or places his second cloth on his shoulders; if he cries; if he has his tuft untied; if he tears his nails or scratches his breast or genital organ or eyes; if he is wanting in an organ or limb; or if his head is completely shaven — then he indicates ill omen to the bitten person.

If the messenger imparts the news to the physician near a forest; or in a house in which no body lives, or at the burial place i. e. a burning ghat or cemetery; or near a place where there is water, e. g., a tank or a lake; or from a place from where he could not be seen by the physician, death of the bitten person is certain.

If the messenger imparts the news when the physician is engaged in the performance of religious duty to the departed ones; or in bathing or eating; or when he is holding discussions about any matter, or when he is engaged near a barber in being

shaved ; or if he is about to start on a journey, or when he is not clean in person, or when he sits dejected — he indicates ill-omen to the person bitten by the snake.

If the messenger imparts the news standing at one of the chief cardinal points, the snake which bit the person is of the hooded-variety (*Darveekara*); if he stands at the corners i. e. 45° away from the cardinal points, the snake is of the *Mandali* variety; if he stands in the midway between these two points i. e. on the line which makes an angle of $22\frac{1}{2}^{\circ}$ with the previous lines, the snake is of the *Rajila* variety; if he stands on the line which makes an angle of $11\frac{1}{4}^{\circ}$ with the previous lines, just mentioned above, it is to be inferred that a rat, a scorpion, a dog, a spider or another insect has bitten or stung the person.

Before the next rule is given, an explanation of the word "*Sara*" is necessary. *Sara* means breath in the nostrils. In our inspiration or expiration, equal quantities of air do not pass through our nostrils. This can be verified by holding our right palm up, the inside of the palm facing towards the left with the thumb under the chin and the digits upright (upwards). The first

digit must touch the tip of the nose. In this position of the palm, if we breathe out, we can feel the breath passing out from each nostril on the inside of the palm as well as on the outside. Then we understand from which nostril — right or left — more breath passes out. This is what is meant by examining the *Sara*. The physician must see to this in his nostrils, when the messenger imparts the news. From the position of the messenger with regard to the physician, and the *Sara* in his nostrils, certain important inferences are to be drawn. They are given below: —

- A The messenger is on the *left side* of the physician when he gives out the news; and just then there is more breath in the *left nostril* of the physician
- i Then, if the messenger mentions the name "snake" or "poison" *first* and the name of the person bitten *secondly*, there is poison which can be cured easily.
- ii But if he mentions the name of the bitten person first and speaks about "snake" or "poison" *secondly*, there is no poison.
- iii After mentioning the fact in *i.* (above) if, the messenger moves on to the right side of

the physician, it is to be inferred that the person bitten is in a state of swoon.

B The messenger is on the right side of the physician when he imparts the news; also there is more breath in the right nostril of the physician.

i Then, in imparting the news if he mentions the *name* of the person bitten *first*, and the name "Snake" or "Poison" secondly, there is less poison and it can be cured easily.

ii After imparting the news thus, if he moves on to the *left* of the physician, another physician to whom the patient had been taken first has already cured the patient.

iii But if the name of "Snake" or "Poison" is mentioned first and the name of the person secondly, death is sure to take place.

To sum up, if the messenger and the breath are on the same side and the name of the person bitten is mentioned first, the poison can be cured easily and the patient will be in good health; if the messenger is on one side of the physician and there is more breath in the opposite nostril of the physician and if the name "Snake" or "Poison" is mentioned first, then the patient will certainly die.

From the number of letters in the first sentence^e spoken by the messenger — perhaps in the Indian Vernaculars — certain inferences are to be drawn by the physician. Count the number of letters in the first sentence. Divide the number by 3. If 1 is the remainder, the poison can be cured very easily; if 2, there is virulence in the poison; still, it can be cured if the physician takes great pains; if there is no remainder, the case is hopeless.

When the same number is divided by 8, and if 1, 2, 3, 4, 5, 6, 7 and 0 are the remainders separately, he is to infer in order Darveekara, Mandali, Rajila, Vendira, rat, insect, untruth spoken to test the physician and the non-poisonous nature of the wound."

It has been said that the physician has to draw certain inferences from Ayana, Paksha, Nakshatra, Thithi, Vara etc. Now these terms will have to be explained first.

Ayanas are of two kinds, Uttarayana and Dakshinayana. Uttarayana is the period when the sun begins to travel from the Tropic of Capricorn to the Tropic of Cancer. Dakshinayana is the period of the return journey of the Sun from the Tropic of Cancer to the Tropic of Capricorn.

Pakshas also are of two kinds — the white and the dark. The period of *fifteen days* from the day after the new-moon to the full moon day is the *white Paksha*, and the period of fifteen days from the day after the full moon day to the new moon day is the *Dark Paksha*. Thus, a month i. e., a period of 30 days, may be said to consist of two halves—the white half and the dark half.

Nakshatras are the 27 asterisms. The map of the Heavens or the Zodiac consists of 12 signs or *Rasis* which are formed by the 27 Nakshatras. Through these the *nine* planets rotate in their order. The names of the 27 Nakshatras or asterisms are as follows:—

- | | |
|---------------------------|--|
| 1. <i>Aswini</i> | 2. <i>Bharani</i> |
| 3. <i>Krittika</i> | 4. <i>Rohini</i> |
| 5. <i>Mrigaseersha</i> | 6. <i>Ardra</i> |
| 7. <i>Punarvasu</i> | 8. <i>Pushya</i> or
<i>Pushyami</i> |
| 9. <i>Aslesha</i> | 10. <i>Magha</i> |
| 11. <i>Poorvaphalguni</i> | 12. <i>Uttaraphalguni</i> |
| 13. <i>Hasta</i> | 14. <i>Chitra</i> |
| 15. <i>Swadi</i> | 16. <i>Visakha</i> |
| 17. <i>Anurudha</i> | 18. <i>Jyeshtha</i> |
| 19. <i>Moola</i> | 20. <i>Poorva Ashadha</i> |

- | | |
|---|---|
| 21. <i>Uttara Ashadha</i> | 22. <i>Sravana</i> |
| 23. <i>Sravishta</i> or
<i>Dhanishta</i> | 24. <i>Satataraka</i> or
<i>Satabhisha</i> |
| 25. <i>Poorvabhadrapada</i> | |
| 26. <i>Uttarabhadrapada</i> | |
| 27. <i>Revathi.</i> | |

These 27 Nakshatras form the Zodiac and a day or a part of it will be occupied by any of these Nakshatras.

Thithis are days counted after the new moon or full moon day. They are fifteen in number. They are as follows:—

- | | |
|----------------------|---|
| 1. <i>Prathama</i> | <i>i. e. the first day after the new-moon or full-moon day.</i> |
| 2. <i>Dwitheeya</i> | <i>the 2nd</i> „ „ |
| 3. <i>Thritheeya</i> | <i>the 3rd</i> „ „ |
| 4. <i>Chathurthi</i> | <i>the 4th</i> „ „ |
| 5. <i>Panchami</i> | <i>the 5th</i> „ „ |
| 6. <i>Shashti</i> | <i>the 6th</i> „ „ |
| 7. <i>Saptami</i> | <i>the 7th</i> „ „ |
| 8. <i>Ashtami</i> | <i>the 8th</i> „ „ |
| 9. <i>Navami</i> | <i>the 9th</i> „ „ |
| 10. <i>Dasami</i> | <i>the 10th</i> „ „ |
| 11. <i>Ekadasi</i> | <i>the 11th</i> „ „ |
| 12. <i>Dwadasi</i> | <i>the 12th</i> „ „ |

- | | | | | |
|-----|--------------------|---|---|---|
| 13. | <i>Thrayodasi</i> | <i>the 13th</i> | “ | “ |
| 14. | <i>Chathurdasi</i> | <i>the 14th</i> | “ | “ |
| 15. | <i>Panchadasi</i> | <i>The new-moon or the full-moon day.</i> | | |

Thus there are *fifteen thithis* in the dark half as well as in the white half. The last *thithi* i. e. Panchadasi, may be either a new moon day or a full moon day.

Vara is a week day, and as every one knows, there are *seven* days in a week. They are called

Ravi vara, Sunday ; Chandra vara, Monday ; Kuja vara, Tuesday ; Budha vara, Wednesday ; Guru vara, Thursday ; Sukra vara, Friday ; and Manda vara, Saturday.

The conjunctions of the week-days with certain Nakshatras are called *mrityuyoga*- literally, *Joining with Death*. The following are the *seven mrityuyoga* days:—

- | | | |
|-----|-----------------------|---|
| i | Sunday + Magha | (the 10th Nakshatra in the order given on page 22.) |
| ii | Monday + Visakha | (16th Nakshatra) |
| iii | Tuesday + Ardra | (6th) |
| iv | Wednesday + Moola | (19th) |
| v | Thursday + Satataraka | (24th 23) |

- vi Friday + Rohini (4th day after new moon)
- vii Saturday + Uttara Ashadha (21st day after new moon)

There is another set of conjunctions of week days with *thithis* called *Dagdhayoga*. They are also *seven* in number. They are as follows:—

- i Sunday + Dwadasi (the 12th day after new moon or full moon)
- ii Monday + Ekadasi (the 11th day after new moon)
- iii Tuesday + Panchami (the 5th day after new moon)
- iv Wednesday + Dwitheeya (the 2nd day after new moon)
- v Thursday + Shashti (the 6th day after new moon)
- vi Friday + Ashtami (the 8th day after new moon)
- vii Saturday + Navami (the 9th day after new moon)

All the above facts can be understood, at a glance, from any calendar or Ephemeris published in any of the Indian vernaculars.

The inferences to be drawn from the above periods, days and conjunctions:—

During Dakshinayana in the white half of a month, males will be bitten by snakes on the *right side* of their body. This means that if they are bitten on their left side, the poison will not be very effective. In the dark half of the month, the *damsa* (i. e. the biting) will be on the *left side*.

In the case of the females, the reverse is the case, i. e., in the white half the *damsa* will be on the *left side*, and in the *dark half*, on the *right side*.

In Uttarayana period, the reverse of what was mentioned in Dakshinayana takes place. The following tabular form will make this clearer.

Sex of the person bitten	Dakshinayana		Uttarayana	
	White half of a month	Dark half of a month	White half of a month	Dark half of a month
Males are bitten on	Right side	Left side	Left side	Right side
Females	Left side	Right side	Right side	Left side

When the messenger imparts the news, if any of his limbs is placed forward or if he touches any of his limbs, the *damsa* may be on that side.

Out of the 27 Nakshatras, the days on which the following *sixteen* Nakshatras happen to be are considered to be inauspicious.

- | | |
|--------------------|--------------------------|
| 1. <i>Aswini</i> | 2. <i>Bharani</i> |
| 3. <i>Krithika</i> | 4. <i>Rohini</i> |
| 5. <i>Ardra</i> | 6. <i>Aslesha</i> |
| 7. <i>Magha</i> | 8. <i>Poorvaphalguni</i> |
| 9. <i>Chitra</i> | 10. <i>Swadi</i> |

- | | |
|--------------------|-----------------------------|
| 11. <i>Visakha</i> | 12. <i>Jyeshtha</i> |
| 13. <i>Moola</i> | 14. <i>Poorva Ashadha</i> |
| 15. <i>Sravana</i> | 16. <i>Poorvabhadrapada</i> |

The following *thithis* also are inauspicious:—

Chathurthi	(the 4th day after full or new moon)	
Panchami	(the 5th day)
Ashtami	(the 8th day)
Navami	(the 9th day)
Chathurdasi	(the 14th day) and
Panchadasi	(full-moon day or new moon day)	

In the dark half of a month, the above days are extremely inauspicious.

In the week-days Saturday and Tuesday are very ill-omened. Sunday also is ill-omened enough but not to the same extent as the first two.

The time of eclipse of both the sun and the moon is extremely ill-omened.

The period of twilight — dusk or dawn — or the crossing time of the sun from one sign in the zodiac to the next sign is very inauspicious.

If the snake-bite takes place on any of the days mentioned as *Mrityuyoga* or *Dagdhayoga*, death may be the final result.

There is yet a 3rd. conjunction of certain *Nakshatra*, *Thithi*, and *Vara* not mentioned above. In this conjunction, the *Nakshatra* may be any one from *Bharani*, *Krittika*, *Aslesha*, *Poorvaphalguni*, *Chitra*, *Swadi*, *Jyeshtha*, *Poorva Ashadha*, *Satataraka* and *Poorva Bhadrapada*; the week day may be any one from Sunday, Tuesday or Saturday and the *Thithi* may be any one of *Chathurthi*, *Shashti*, *Navami* and *Dwadasi*. If the Snake-bite takes place on any day of the above conjunctions, the patient is sure to die.

The locality from where the snake bites will, to a certain extent, determine the virulency or otherwise of the poison; for, we have already seen that different varieties of snakes dwell in different places and frequent particular localities. If the snake bites from the following localities the poison is virulent and in all probability, the patient has the chance of meeting with his death:— A garden with sweet-scented flowers; a place where there is water close by e. g. a tank, or a lake; a riverside; a deserted house; the hollow of a tree; the place where four paths meet; a temple; the burial ground; ant-hills; a forest; a place where people gather for a meeting; an island; a hill; the temple of the

Buddists ; the *cool-shed* from where drinking water is freely given as charity to way-farers in Summer season; the outskirts of a village; a cow-shed; the upper story of a house; the place where grass grows dense; an old well; a moat; the end of a road or path; from below the following trees, viz., *Hyperanthera moringa*; *Terminalia Belerica* (*Beleric myrobalan*); *figus glomerata* (cluster - fig); *figus Religiosa*; *figus Benghalensis*; *Eugenia Jambolana*; from among the cluster of bamboos or canes.

It is extremely difficult to cure the poison, if the snake bites at the following vital parts in the body.- The crown of the head; the space between the two eye-brows; the cheek; the nose; the ears; the eyes; the chin; the neck; the palm (inside); the nipple; the left side of the chest; the shoulders; the arm-pit; the stomach; the navel; the genital organs; the ankle, the calf-muscle and the heel.

UPASRUTHI, OBJECTS OF ILL-OMEN AND GOOD OMEN:

Upasruthi has also to be taken into consideration by the physician or the messenger or the patient. *Upasruthi* means "what is heard by one accidentally, when spoken by another in certain other connections". The words uttered by a stranger in the hearing of the physician when he is about to

start to a patient indicate, it is said, what will happen in the future as regards the physician's business on hand just then. To give a few instances of Upasruthi.

When the physician is on the point of starting to a patient, if somebody, in certain other connections, calls out "Go" or "Don't go"—these words indicate ill-omen. If he hears the word "killed" or "Died" or the cursing of another person or the sneezing sound or the sounds of quarrelling or if he does not get at readily what he wants, certainly his presence will not produce the desired good result. When he is about to start, if his house is being swept, it is good for him not to go. If a cat crosses his path soon after his starting; or if he sees a snake as the first object after starting; or if a vessel full of water falls and is broken to pieces, it portends difficulty in curing the poison.

But words which portend happiness, the trumpeting of an elephant, the roaring of thunder, music, the sound of conch-shell, band, the chirping of a magpie, crow's caw, the sound of the cuckoo or the pea-cock or the recital of Scripture, when one is about to start on a business, indicate good omen.

The first object that comes from the opposite direction towards the physician or the messenger, when he has already started from his residence also may indicate ill-omen or good omen according to its nature.

The following are considered objects of ill-omen:— Ashes ; oil ; sesamum seeds ; skull ; a buffalo ; fuel ; broken earthen ware vessels ; cotton ; a monkey ; common salt ; a carpenter ; a person with matted hair ; flesh, bones ; a jackal ; a person with dirty clothes on ; an axe ; a person carrying things for the propitiation of the departed ones ; and a single Brahmin.

The following are objects which indicate good omen:- An unmarried girl ; a King ; an elephant ; water ; cows ; fruits ; a dancing girl ; two Brahmins ; milk ; silver ; gold ; conch-shell ; curd, toddy ; ghee ; a flag ; an umbrella ; rice ; white-flower ; flaming fire or a child.

CHAPTER 3.

- A. Weights and measures. B. Dosage.
C. Certain terms explained.

D. General methods of preparing (i) medicated oils or ghees. (ii) Decoctions (Kvatha); (iii) Pills (Gulika) and (iv) Powders (choorna).

A. I. LIQUID MEASUREMENT.

1 drop	= 1 minim	= 1 Bindu.
60 minims	= 1 Drachm	= 1 sana = 1 tea-spoon
8 drachms	= 1 oz	= 1 sukti
2 oz	= —	= 1 palam or mana
8 palams or 16 oz	= 1 lb	= 1 Kuduba
4 lbs	= —	= 1 Dravaprastha
10 palams or 20 oz	= 1 pint	
8 pints or 10 lbs	= 1 gallon	

II. MEASUREMENT OF WEIGHT.

1 paddy grain	= 1 Veesa (Dhan)
2 $\frac{3}{4}$ veesa	= 1 grain
4 veesa	= 1 Gunja (seed of Abrus Precatorius)
2 Gunjas	= 1 manchadi (seed of Adenanthera Pavonia)
2 manchadi	= 1 Panamita = 6 grains
10 Panamita or 60 grains	= 1 drachm
1 $\frac{1}{4}$ drachm or 12 $\frac{1}{2}$ panamita	= 1 Kazhanj
30 Panamita or 3 drachms	= 1 Rupee-weight or 1 Tola = 180 grains.
8 drachms	= 1 oz.
15 drachms or 5 tolas	= 1 palam.
8 palams	= 1 lb.

B. DOSAGE.

"The doses of medicines are not fixed. They are regulated by the age, sex, strength, body-weight, emotion, the digestive power of patient, nature of illness, the state of viscera and humours, and lastly by the properties of the individual drugs."
Nadkarni,

The maximum adult dose is $1\frac{1}{4}$ tola weight of medicine in the form of electuary, or the same weight of medicine well pounded and mixed in 6 oz. of a liquid — used as a vehicle. For children due reduction, according to the age, will have to be made.

(C) CERTAIN TERMS EXPLAINED.

1. *Lepa* means external application. The paste formed for *Lepa* must be thickly put on the affected part.
2. *Pana* — Internal administration. The maximum dose is given under 'Dosage'.
3. *Nasya* — application into the nostrils. "Twelve drops" of a prepared liquid is the maximum quantity to be syringed into each nostril of a strong adult.
4. *Anjana* — application into the eyes. A few grains of a medicine or medicines rubbed in 4

or 6 drops of an appropriate liquid and made into a semi-liquid condition will have to be applied into the eyes to a length of $\frac{1}{2}$ inch in each.

Thandulambu may be used as the vehicle for *Pana* or as the liquid in which medicines are to be ground for *Lepa*, unless otherwise stated.

Note: Thandulambu=Thandula (=unboiled rice)+ambu (=water). *i. e.*, water in which unboiled rice is well washed. This water is often used for making *Lepa*, and also as a vehicle for taking powders in. Water in which *Thandula* is washed and decanted for the first time is used for making *Lepas*, and the water in which the same rice is washed for the second time must be filtered through a clean cloth before it is used as a vehicle for powders. Water boiled and then cooled is preferable to be used for this washing.

Medicines under any prescription are to be taken in equal weights, unless otherwise stated.

Milk=Cow's milk; ghee=cow's ghee; Trikatu or Vyosha or Thryooshana=long Pepper, Black Pepper and Dry Ginger.

The *four* milky trees are ficus Glomerata, ficus Religiosa, ficus Benghalensis and ficus Tjakela.

Dasapushpa are the *ten herbs*, viz., Vernonia cinera, cacalia souchifolia, Evolvulus Alsinoides, cynodon Dactylon, Eclipta Erecta (E. Alba),

Cardiospermum Helicacabum,
Tirutali, Tuberous root of *curculigo orchioides*
Mukkutti, (*Desmanthus Nathns*), *Aerus Lanata*.

Phalatraya or *Triphala* = the 3 myrobalans,
viz, the fruits of *Terminalia chebula*, *Fimbricia*
officinalis and *Terminalia Belerica*, with stones
removed.

Trijataka = leaves of *cinnamomum Tamala*,
Immature fruits or flower buds of cinnamon
(*cinnamomum cassia*) and cardamoms (*Elettaria*
cardamomum).

D. I. GENERAL METHODS OF PREPARING MEDICATED OILS (GINGELI OR COCOA-NUT) AND GHEES.

Medicated oils and ghees can be prepared
either (a) in the decoction of the dry parts of herbs
e. g. roots, fruits, stems, barks or (b) in the fresh
juices of their parts such as leaf, bark, stem or the
whole herb.

a) To prepare one *Dravaprastha* ($3\frac{1}{2}$ pints) of oil
or ghee in decoction.

16 palams (i. e. $16 \times 5 = 80$ tolas) of the herbs
must be taken. If there are different herbs or their
parts, these must be taken in equal parts. They
must be cut into small pieces and well bruised
in a mortar. For each *pulam* of medicine one

Dravaprastha of water ($3\frac{1}{2}$ pints) must be taken. So for 16 palams, $16 \times 3\frac{1}{2}$ pints = $6\frac{2}{3}$ gallons of water are required. The bruised medicine is put into the water and boiled till the water is reduced to $\frac{1}{4}$ its bulk, i. e., $1\frac{2}{3}$ gallons (= 4 *Dravaprastha*). Then oil or ghee equal to $\frac{1}{4}$ of the decoction i. e. $3\frac{1}{2}$ pints must be mixed with it along with *kalka* (paste).

The medicines for *kalka* also must be taken in equal parts. The total weight must be $\frac{1}{8}$ of the total weight of oil. i. e., for each 16 oz. of oil, $8 \times 1\frac{1}{4}$ drachm = 10 drachms. Therefore for one *Dravaprastha* of oil 40 drachms of medicine must be made into *kalka*.

Kalka literally means "what is ground". So in order to grind well, the parts of herbs, here also, must be cut into small parts, warmed in the sun, and powdered in a stone or wooden mortar and it must be passed through a fine seive (e g. cloth). Again the sediment must be powdered. No portion is to be thrown away. This fine powder must afterwards be well ground on a curry stone in a portion of the decoction.

This *Kalka* also must be well mixed in the decoction. Then boil the whole for *three* days over a low fire, thus allowing time for the essence of medicines to mix with the oil.

There are *Three* kinds of *Pakas* (Stages) for the oil—*mridu*, *madhyama* and *Khara*. When the watery portion in the mixture is boiled away at first, the *Kalka* becomes mud-like; gradually the watery portion from it also goes away as vapour bringing it to *mridupaka i. e.*, the boiled paste is soft. When the mixture is further heated, the *Kalka* comes to *madhyamapaka i. e.*, the intermediate stage. It is then soft enough to be made into pills with the fingers. When the *Kalka* is heated above this *madhyamapaka*, it is said to be overheated, and the *paka* or stage to which it is heated is called *Kharapaka*. It then can be powdered into sand-like granules.

When the oil or ghee is to be used for *Nasya*, it must be strained through a cloth, when the *Kalka* is heated to *mridupaka*; when it is to be internally administered, it must be strained when the *Kalka* is heated to *madhyamapaka*; when the oil is to be used for external application, it must be strained when the *Kalka* is heated to *Kharapaka*.

b) Oils and ghees can also be prepared in *Swarasa*, i. e., in the fresh juices of certain herbs.

To prepare one *Dravaprastha* ($3\frac{1}{2}$ pints) of oil or ghee, the *Swarasa* must be four times the oil. At the rate of one *palam* (= 5 tolas) of the herbs for

16 oz. of water, 16 palms of the parts of herbs (such as leaves or barks etc) must be well bruised and squeezed in *four* Dravaprastha ($1\frac{2}{3}$ gallons) of water. The sediment of the herbs must be again bruised and squeezed in the same water. Do so thrice so that all the possible juice is expressed. Filter the liquid through a cloth-seive. With this the oil (or ghee) and Kalka=30 drachms at the rate of 7¹ drachams for 16 oz. of oil, must be mixed. The remaining processes are as described under cils prepared in decoction.

A proportionate reduction can be made, if a less quantity of oil or ghee is prepared.

METHOD OF PREPARING PILLS.

The parts of herbs, if dry, must be made into fine powder as was described in the preparation of *Kalka*. Then the powder (choorna) must be ground on a curry-stone in proper liquids into a pill-mass. Sometimes the process of grinding must be done for a number of days. The pill-mass must be made into pills with proper size and then dried in the shade.

Note: Any *Choorna* can be made as described above. *Choornas* themselves are usually administered in *Thandulambu*, milk or water; sometimes with ghee, honey or sugar, the quantity being just sufficient to mix the dose.

Decoctions (Kvatha) for internal administration are prepared by taking parts of the herbs in equal weights. The total weight must be *five* tolas. They are cut into small pieces, bruised in a mortar and boiled in *one Dravaprastha* of water till the water is reduced to $\frac{1}{4}$. Half of this liquid with the boild sediment ($\frac{1}{2}$) is taken, the sediment is well squeezed and the decoction is filtered. This is again boiled and reduced to 6 oz. Sometimes rock-salt (3 pinches), honey (8 drops), or a proper pill will have to be rubbed and joined in it before it is administered. When honey is to be added, the decoction must be cooled before it is added. Morning and evening are the proper times for administring decoctions.

CHAPTER 4.

Prescriptions for the Poison of the hooded. Variety (i. e , Cobra or Darveekara.)

A For *Lepa* i. e., external application at and around the bitten part.

- i. In the expressed leaf-juice of *Erythrina Indica*, grind well *Asafœtida*, black pepper (*Piper*

Nigrum) and dried rhizome of *Acorus Odoratus*, and put this paste thickly on and around the bitten part.

Note: Some water must be sprinkled on the pounded leaves of *Erythrina Indica* to get the juice.

- ii. Sodii Biborax ($\text{Na}_2 \text{B}_4 \text{O}_7, 10 \text{H}_2\text{O}$) and soot formed on the walls or upper part of a kitchen by the constant sticking of smoke, well ground in urine (human) may be applied externally.
- iii. The ripe leaf of *Calotropis Gigenta* and *asafoetida* well ground and made into a paste can be used as *Lepa*. At the same time this can be taken internally also
- iv. The root of *crotalaria verucosa* and *asafoetida* ground in urine may be applied externally.

FOR LEPA AND PANA.

- i Take of Bulb of *Allium Sativum*, *asafoetida*, and *Trikatu*, make into a paste in the fresh leaf-juice of *Calotropis Gigenta* (*madar*), and use this as *Lepa* and *Pana*.
- ii Take of the root of *Aristolochia Indica* and dry ginger, grind well in *thandulambu*, apply externally and administer internally.

iii Take of the root of *Indigofera tinctoria* (*Indigofera Indica*), grind in water, and use as Lepa and Pana.

iv Take of *Trikatu*, grind in Thandulambu or cold water, apply externally and administer, in right dose, internally.

v Take of the root of *Pongamia Glabra*, and black pepper, grind well in water and use as Pana and Lepa.

FOR INTERNAL ADMINISTRATION.

vi The dried root of *aswagandha* (*withania somnifera*) well ground in water may be taken internally.

vii The root of *Tabernæmontana Coronaria*, and Black pepper well ground in pure water may be used for Pana.

viii The root of *cocculus cordifolius*, and Black pepper well ground in water.

ix Take of Sandalwood (*Santalum Album*) and the fibrous wiry roots of *Andropogon Muricatus*, well grind in water and administer internally.

x Take of the roots of *Amaranthus Polygamus* and of *withania somnifera* (*Aswagandha*), grind

well in water, and take internally as an antidote.

- xi* Rock-salt (Sodium chloride Impura) and the ripe leaf of *calotropis gigantea* (madar) ground well in urine and taken internally is very effective in all kinds of cobra poison.
- xii* Take of the *seeds* of *Acacia speciosa* and of *calotropis gigantea*, and *Trikatu*, grind well in the milky exudation (i. e., gum) of *calotropis gigantea* and make into a paste, apply externally and use as *Pana* also.

When the bitten person becomes senseless or faints and goes into the sleeping condition on account of poison, the first duty of the physician is to wake him up from that state. This waking up is accomplished by performing *Anjana* or *Nasya* or by both. Performing *Anjana* is to apply a stimulant into both the eyes. *Nasya* is any proper stimulant applied into the nostrils. In performing *Nasya* the liquid stimulant is forced by means of a syringe. The stimulants for *Anjana* and *Nasya* are such as will not only wake the person up from his hypnotic state but also will function as a proper antidote for the poison.

Below are given certain of the Stimulants used as *Anjana* and as *Nasya* in the poison of the hooded variety.

- i In the leaf juices of Piper Betel and Datura stramonium, rub a few grains of Rock-Salt and syringe 12 drops in each nostril of a strong adult.
- ii Take of the *seeds* of Abrus Precatorius and of Mimosa Elengi, and Black pepper. A few grains of these should be well-rubbed and mixed either in urine, or in the fresh leaf-juice of Leucos Aspera, and it may be used for *Anjana* and *Nasya*.
- iii In the leaf-juice of ocimum sanctum and Leucos Aspera, rub a few grains of Black pepper (the outer black skin of which is removed) in a rough porcelain vessel or on a granite stone. This liquid may be used for *Nasya*.
- iv Asafoetida, Black pepper, Rock Salt (Sodium chloride Impura) and mercury rubbed in urine or in the fresh leaf-juice of Leucos Aspera, when used as *Nasya*, will awaken the patient.
- v The bulb of Allium sativum (garlic), Sodii Bibborax, *Trikatu*, Acorus calamus and

asafoetida well pounded in a granite mortar with a granite pestle in sufficient quantity of the leaf-juice of *Leucus Aspera*, can be made into pills as big as a seed of *Abrus Precatorius*. These pills must be dried in the shade and kept well in a stoppered bottle. One pill rubbed in sufficient quantity of the leaf-juice of *Leucus Aspera*, when occasion arises, can be used for *Anjana* and *Nasya*.

- vi *Asafoetida* must be well ground on a curry-stone with a granite pestle in sufficient quantity of fresh leaf-juice of *Eclipta Erecta* (*E. Alba*) for a long time, say, four hours. This must be put in the shell of crow's egg and dried in the sun. A few grains of it rubbed in urine, or in the leaf-juice of *Leucus aspera*, or in the leaf-juice of *Hyperanthera Moringa* when syringed into the nostrils, will wake up the patient drowsy from the effect of poison
-

CHAPTER 5.

PRESCRIPTIONS FOR THE POISON OF THE 'MANDALI' VARIETY (vipers)

In higher Sanskrit works mention is made of sixteen different kinds of "Mandali" (i. e. vipers). The nature of each kind, the symptoms of poison of each in *seven Dhatus* and the cure for each of them also are mentioned in them. But it is difficult for one who has not made this a life-study to diagonalise them. Hence it is proposed to give below certain general prescriptions which would be applicable to the poison of all the different species of Mandali (vipers).

As in the case of Cobra Poison, here also the prescriptions are given in the following order, viz.,

- A* For external application (Lepa).
- B* For external application as well as internal administration.
- C* For Anjana.
- D* For Nasya.
- E* For Anjana and Nasya.

When Mandali Poison pervades the different *Dhatus*, in addition to a "painful and swollen condition" locally at the bitten part, "a very variable degree of constitutional disturbances lasting

in some instances for weeks" also would take place. Some of these disturbances are fever, vomiting of blood, oozing of blood through the pores of the skin, yellow colour of urine, unquenchable thirst, retention of urine, head-ache, spitting of blood, purging of blood, and a burning sensation. Prescriptions for them also are given.

A Lepa.

i The root of *Strychnos Nux-vomica* rubbed on the granite mortar in *Thandulambu* may be applied externally in and around the wound.

ii The peeled root-bark of *Hemidesmus Indicus* and the dry rhizome of *acorus odoratus*, sliced and well-pounded in *Thandulambu* may be applied as *Lepa*.

B iii The root of *Indigofera Tinctoria*, well pounded, and taken internally in tepid water, and used as *Lepa*, is an effective antidote.

iv The root-bark of *Pongamia Glabra* well pounded in *Thandulambu* may be administered internally and used as *Lepa*.

v Sandalwood paste mixed in cold water may be taken internally.

Note: The sandalwood paste is made by rubbing sandalwood with a little water on a hard stone called *San* : specially used for that purpose.

- vi The root of *stercospermum chelonioides*, sliced and well ground in *Thandulambu* may be used as *Lepa*, and taken internally.
- vii The root of *Ophiorrhiza Mungos*, dry rhizome of *Acorus odoratus* and sandalwood, well sliced and ground, may be administered internally.
- viii Peeled root of *Glycyrrhiza Glabra*, sandalwood and Fibrous root of *Andropogon Muricatus* may be used as *Lepa*, *Pána* and for *Nasya*.
- ix The roots of *Calotropis Gigenta* and of *Borhaavia Diffusa* (*B. Repens*) may be applied externally and taken internally.
- x Take of the *bark* of *Symplocos Racemosa*, Sandalwood, rhizome of *curcuma Longa* (*Turmeric*), root-bark of *Berberis Aristata*, the wood of *Pinus Longifolia*, root of *Calotropis gigenta*, Peeled-root of *Aegle Marmelos* and the roots of *Rubia cordifolia* (= *C. manjishta*) and of *stercospermum chelonioides*, in equal parts, pound well in *Thandulambu*, apply externally and administer internally.
- xi The roots of *Nim* (= *melia Azadirachta*), *Neeli* (= *Indigofera Tinctoria*) and *Karanja*

(= *Pongamia Glabra*) may be used as a *Lepa* and administered internally as a sovereign antidote.

When the patient is in the hypnotic or sleeping state, drops of medicine must be instilled into the nostrils (*Nasya*) or applied to the eyes (*Anjana*) as stimulants to wake him up, as in the case of cobra poison.

Each of the following prescriptions is for *Nasya*.

- i Black pepper (*Piper Nigrum*), Garlic (Bulb of *allium sativum*) and dry ginger well rubbed in the leaf-juice of *Acalypha Indica*, and syringed into the nostrils, will wake him up.
- ii A few grains of the seed (after removing the Seed-leaf) of *Mimusops Elengi* and *asafoetida* each, rubbed well in breast milk on a hard rough stone, say granite, can be used for *Nasya*.
- iii A few grains of Rock-salt and *Trikatu* rubbed in breast-milk may be used for *Nasya*.
- iv Dry rhizome of *Acorus calamus* and *Piper Nigrum*, well-rubbed in the leaf-juice of *Leucus Aspera* in a mortar may be use for *Nasya*.

- v Rock-salt and Piper Nigrum well rubbed in the leaf-juices of Ocimum Sanctum and Hyperanthera Moringa may be used for Nasya.
- vi Dry ginger, root of Aristalochia Indica, Rock-salt and garlic well rubbed in the leaf-juice of cardiospermum Helicacabum may be used for Nasya.
- vii Leaves of Leucus Aspera and of Ocimum Sanctum and Black Pepper well-ground and mixed in the leaf-juice of cardiospermum Helicacabum may be used for Nasya.
- viii A few grains of Black pepper (Piper Nigrum) alone rubbed in the leaf-juices of Leucus Aspera and Gendarussa Vulgaris may be used for Nasya.
- ix The seed of Mimusops Elengi, dry ginger, Black pepper and garlic well rubbed and mixed in urine may be used for Nasya.

PRESCRIPTIONS FOR ANJANA.

- i The seed of Acacia speciosa and Black pepper rubbed and mixed in a few drops of leaf-juice of Betel (Piper Betel) may be used as a stimulant in the eyes.
- ii Black pepper the outer red skin of which is removed when it is ripe enough and which

is kept for two years or more, alone is said to be very efficacious to be used as *Anjana*, rubbed in the leaf-juice of Betel.

- iii The seed of *Mimusops Elengi* rubbed in the leaf-juice of *Ocimum Sanctum* may be ends as *Anjana*.
- iv A few grains of Rock-salt and the seed of *cajanus Indicus* rubbed in the leaf-juice of *ocimum Sanctum* may be used as *Anjana*.
- v *Trikatu* rubbed in the leaf-juice of *ocimum Sanctum* may be used as *Anjana*.

Certain constitutional disturbances occurring in cases of viper poison with prescriptions for them are given below. All of them may not occur in the poison of any one kind. Further, they will occur only when the poison is at different stages i. e., when it has entered the different *Dhatus*.

The patient will be raving and behaving like a mad man.

- 1. Sandal-wood, made into paste, and the fibrous root of *Andropogon Muricatus* well pounded in cold water, in equal parts, may be administered internally in cold water.

2. Urine may be of yellow colour.

Bark of *Pongamia Glabra* well pounded and mixed in tepid water may be internally administered.

3. When fever occurs,

The peeled root of *Tamarindus Indica*, sliced, well-pounded in, and mixed with cow's milk may be used as *Pana* at frequent intervals.

4. If there is vomiting,

Triphala, well pounded or ground in *Thandulambu* or lukewarm water may be used as *Pana*.

5. When there is the feeling of intolerable heat, Sandal-wood paste, fibrous root of *Andropogon Muricatus* and root of *Pavonia odorata*, in equal parts, well ground in cold water or *Thandulambu* must be smeared over the whole body.

6. When blood is vomitted,

Leaf of Nim (*Melia Azadirachta*) well ground in cow's milk must be administered internally—to be given frequently.

7. If blood is being purged,

The *bark* of Kadamba (*Anthocephalus Kadamba*) well ground in cow's milk is to be given internally.

8. If the various joints become weakened,
The root of *Boerhavia Repens*, well ground—to be used as *Pana* in lukewarm water.

9. For "wind in Stomach"

Take of powdered *Trikatu* and Rock-salt and administer internally in lukewarm water.

10. For *Thirst* which would be insatiable with ordinary water,

Take of the watery-juice of the root-stock of the plantain tree (*Musa Paradisica*) — the Special kind called *Kadali* the fruit of which is considered sacred by the Hindus — mixed with milk and administer it internally *ad libitum*.

11. For "Spitting of blood" and for blood oozing
Through the nostrils,

Mix the leaf-juice of *Juthi* (*Jasminum — Grandiflorum*) and gingeli oil, in equal parts, and administer it internally.

12. For "blood coming through the pores of the skin through the body,"

Take of the sliced root of *Hyperanthera* *Moringa* and fry it in an earthenware pot over a fire till the colour is changed to reddish. It should not be charred. Powder it well and pass it through a cloth or fine sieve. Powder again the sediment in the sieve. Pass that also through the sieve. The powder must be very fine. Mix this powder in sufficient quantity of ghee. Smear this on the patient's body and rub gently for a time.

13. For "Retention of urine and faeces,"

- a) Take of finely powdered Long Pepper and the dried ripe seeds of *Elettaria cardamomum*, and administer this powder internally in the sweet water of the unripe cocoa-nut fruit or in lukewarm water.
- b) Or the above mixture may be continuously poured again and again on the abdominal portion below the navel for 1½ hours.
- c) Or the seeds of common cucumber (*cucumis sativus*) and the excreta of rats, in equal parts, made into a paste in *Thandulambu* may be used as a Lepa (Poultice) on the lower part of the abdomen.

- d) All parts of the herb *Indigofera Aspalathoides* ground in Thandulambu may be used as Lepa as in (c) above.
- e) The root of *Gendarussa Vulgaris* ground in Thandulambu may also be used as a *Lepa*.
14. For "the Impurity of blood" caused by Mandali (viper) poison, prescriptions of decoctions are given below :—
- a) Prepare a decoction of the *Skinned root-bark* of *Hemidesmus Indicus*, *sandalwood* and *peeled root* of *Glycyrrhiza Glabra* — all cut into small pieces — in the usual way. Cool. Add 6 drops of honey and 3 pinches of sugar. Administer it morning and evening, before meals, for a week.
- b) Take of root of *Holarrhena Antidysentrica* and prepare a decoction as in (a) above. Administer it similarly.
- c) Take of the *barks* of Nalpamara (the four milky trees) — Total $2\frac{1}{2}$ tolas — bruise, put in 12 oz. of milk and pour 8 times water (i. e. 8×12 oz.) Boil and evaporate the whole of the water. In *half* the quantity of the milk strained, mix 3 pinches of sugar and 3 pinches

of powdered Long Pepper. Administer it in the morning. The other half made tepid may be administered in the evening. Do so for a week.

15. Antidote for Mandali (viper) poison — especially of that variety called 'Raktamandali' the poison of which is characterised by the vomiting of blood and the oozing of blood through the pores of the skin :—

Take of the root of *Saussurea Lappa*, *Trikatu*, Rock-Salt, root-bark of *Berberis Aristata*, Soot on the walls of kitchen, root of *Rubia cordifolia*, Butter, curd, honey — all in equal weights ; the first eight finely powdered and passed through a cloth or sieve are rubbed and mixed with the last three. Smear this over the whole body of the patient and rub gently.

16. For headache, eye-disease and burning sensation in the abdomen :—

Boil well the sliced *bark* of *Embllica officinalis* in sufficient quantity of milk. Grind well the above bark together with the bulbous root (outer skin scraped) of *Cyperus Rotundus* and sandalwood (made into paste), in equal

parts, and mix so as to form a poultice. This may be applied on the forehead thickly.

TO DISPERSE SWELLING CAUSED BY POISON.

17. a) Take of the *roots* of withania *Somnifera* (=Aswagandha sold in bazaars), of *Acacia* — *speciosa*, of *Hyperanthera* *Moringa*, and of *Boerhavia* *Diffusa*, in equal parts, make a paste of these by well grinding in *Thandulambu* and apply thickly on and around the swelling. This may be put on frequently as the previous coating dries.
- b) Take of the *barks* of *spondias mangifera*, *Pongamia Glabra*, *Tamarindus Indica*, *mangifera Indica*; *root* of *Aristolochia Indica*, dry — *rhizome* of *Acorus calamus*, the fresh tubers of *curcuma Longa*, and the *root* of *Cissampelos Pereira*, in equal parts, well grind in *Thandulambu* and make into a paste. This may be put on the swelling as detailed above.
- c) Cut a fruit of *Datura Stramonium* into halves. From one half remove the seeds and fill it with rock-salt. Place the halves in the original position and tie the two together with a string. Place it in *Thandulambu* in an earthenware vessel, close the vessel and

boil the liquid. Afterwards, take the fruit out and grind it in the same liquid on a hard stone-mortar. The lukewarm mixture may be smeared over the swelling frequently, as the previous coating dries.

- d) Boil ghee—the older, the better—in which powdered rock-salt is mixed. (Proportion 16 oz. of ghee, $3\frac{3}{4}$ drachm of rock-salt.)

When this becomes lukewarm, pour this
i over the wound and the swelling with a spoon frequently for $1\frac{1}{2}$ hours. The cooled ghee may as often be made lukewarm as required.

- ii Arrange 10 or 12 ripe leaves of *Calotropis Gigenta* one above the other with their ends turned in the opposite directions alternately. Roll the leaves together from side to side and tie it with two strings at two places, each one inch away from the middle portion. Cut the roll vertically in the middle. Then two rolled halves are got. The cut-end may be dipped in the above boiled ghee and when it becomes sufficiently warm enough to be endured by the patient, place it on the wound and swelling. Continue to do so very frequently till the roll becomes cool. When it becomes cool, do so

with the second which has been kept ready at the proper temperature. Do so at least for half-an-hour with the rolls alternately.

The above is a sovereign remedy not only for removing swelling but also for poison, pain and burning sensation.

e) The following is another sovereign remedy for removing swelling, pain and poison.

i Take of the *leaves* of *Acalypha Indica*, curry-leaf (*Bergera Koenigii*), *Dæmia Extensa*, *Calotropis gigenta*, *Tamarindus Indica*, *Datura Stramonium*, *Karthotti* and *Hyperanthera Moringa*, in equal weights. These must be finely ground in *Thandulambu* on a hard stone so as to form a paste (*Kalka*). Mix this well with an equal weight of she-buffalo's dung. Divide this into halves and tie them as two separate *Pottali*, i. e., put this paste in pieces of cloth and tie the cloth as a tight bag. Place them in an earthenware vessel containing *Thandulambu* or cow's urine. Close the vessel with another vessel and boil. Then the patient's swollen part must be smeared over with ghee and the above bag

with sufficient warmth gently pressed frequently on the different parts of the swelling till the bag becomes cool. Then use the second one as the first, while the first is again warmed and made ready for use. Do so for $1\frac{1}{2}$ hours. If there is much swelling, do the above process thrice in a day with the same bags — in the morning, at noon, and in the evening.

ii) The above leaves may be bruised and pressed. The juice thus got may be made lukewarm. It may be poured over the swelling with a spoon continuously for $1\frac{1}{2}$ hours

iii) The paste of the above leaves alone may be used as *Lepa*.

f) Take of bark of *Hyperanthera moringa*, root of *Bœrhavia Diffusa*, tubers of *curcuma Longa*, dry rhizome of *Acorus odoratus*, sandalwood, root of *cissampelos Pereira*, root of *Aristolochia Indica*, Peeled root of *Glycyrrhiza Glabra*, bark of *Acacia Speciosa* and dried spiny fruit of *Tribulus Terrestris*, in equal parts, grind in *Thandulambu*, make into a paste, warm and apply as *Lepa*.

g) When the patient is not able to stand the application of *Pottali* or *Lepa* on account of

excessive pain, recourse must be had to the process of *Dhara*, literally, "flow". In this process a medicated liquid is made to flow continuously on the swollen part for some time. With *Dhara*, the poison, the pain, the burning sensation and the swelling will be destroyed

Prescriptions for *Dhara* are given below :—

- i Sandalwood paste is mixed in cold water (Proportion: 5 tolas in $2\frac{2}{3}$ pints of water) and *Dhara* may be performed. i.e. the liquid may be continuously poured on the swollen part for $1\frac{1}{2}$ hours. The same liquid may be again and again used during this period.
- ii Take of leaf of *Loranthus* growing on the Nux-vomica tree (*strychnos Nux-vomica*), sandal-paste, root of *Asparagus Racemosus*, leaf-juice of *Alœ Litoralis*, the stem of white gourd melon (*Beninkasa cerifera*) and the leaf of Castor-oil plant (*Ricinus communis*) — in equal weights — each $3\frac{1}{2}$ tolas (total 20 tolas). Those to be cut are cut and bruised — and all boiled in $9\frac{1}{2}$ pints of water till the water is reduced to half its bulk (=4 $\frac{1}{2}$ pints).

Take an earthenware pot; make a small hole at its bottom and insert somewhat loosely a wick made of a clean piece of washed cloth. Hang the pot so that its height is about a foot from the swollen part of the patient. Put a few leaves of Nim in it and pour the above liquid, when it becomes lukewarm, into the vessel. The liquid must flow along the wick freely on the swollen part and it must be made to flow on the whole swollen part. This could be done by moving the pot. Continue to do so for $1\frac{1}{2}$ hours, and thrice in a day.

When the wound (i. e. the part stung) becomes an ulcer with swelling, pain and a burning sensation due to poison resisting the effects of antidotes hitherto applied, the following medicated oils may be applied to counteract the effects of poison and to heal the ulcer.

- a) 16 palams (= 80 tolas = 2 lbs) of Cynodon Dactylon well bruised in a mortar must be mixed and squeezed in $4\frac{1}{3}$ gallons of water. The sediment must be taken again, bruised and squeezed. Do thus thrice so that all the juice is well mixed with the water. Strain the whole liquid through a cloth.

With this mix 30 drachms of the *peeled root* of Glycyrrhiza Glabra powdered and ground into *Kalka* (paste) in sufficient quantity of the above liquid and mix also $2\frac{2}{3}$ pints of old cocoa-nut oil. Boil the whole on a slow fire so that the *Kalka* comes into *Kharapaka*. Then strain the oil through a sieve.

When cooled, a portion of this oil must be poured as *Dhara* on the ulcer for $1\frac{1}{2}$ hours. A wick of a clean piece of cloth soaked in the oil may be inserted in the wound. The ulcer of viper poison will then be healed up.

- b) Take of 8 palams (=40 tolas) of the herbs, Herpestis Monniera and Cynodon Dactylon each, bruise and squeeze the juice thrice in $4\frac{4}{5}$ gallons of water as described in the previous case.

For *Kalka* take of dry tubers of Curcuma Longa, the barks of Nalpamara (=the four milky trees), peeled root of Glycyrrhiza Glabra, *Vyosha*, sandalwood, and the root of Ixora coccinea, in equal parts, each nearly 3 drachms (total 30 drachms), grind well in the above juice and mix with it.

Mix with it $2\frac{2}{3}$ pints of old cocoa-nut oil,

boil till the water is evaporated, and the *Kalka* becomes over-heated. Strain the oil.

The cold oil may be used for *Dhara* ; and it may be applied to the wound at other times also frequently. Even the over-heated paste well ground in the oil may be applied to the ulcer.

CHAPTER 6.

ANTIDOTES FOR THE POISON OF THE RAJILA VARIETY.

A Prescriptions for *Lepa*.

- i* The skinned root-bark of *Hemidesmus Indicus* ground in urine may be frequently applied externally.
- ii* Root of *Natham*, *Vyosha*, and Garlic well-ground in the leaf-juice of *Ocimum sanctum* may be applied as *Lepa*.
- iii* Take of *Asafoetida*, *Fippali* (Long Pepper), Rock-salt, skinned root-bark of *Hemidesmus Indicus*, and root of *Aristolochia Indica*, grind well in urine and apply as *Lepa* frequently.

FOR INTERNAL ADMINISTRATION.

- B i* Dry ginger well ground on a hard curry-stone may be given internally in lukewarm water.
- ii* Rock-salt and *Pippali* (=Long Pepper) well ground may be used as *Pāna* in lukewarm water.
- iii* The root of *Tephrosia Purpurea* (white variety) may be administered internally in *Thandulambu*.
- iv* The dried rhizome of *Acorus Calamus*, and Black Pepper, well ground, may be given internally.
- v* Take of the root of *Indigofera Tinctoria*, 3 parts, and dry ginger, 1 part. Grind them well in *Thandulambu* and administer internally.
- vi* Take of *Trikatu*, grind well and administer internally in lukewarm water.
- vii* The leaf of the Parasitic plant growing on *Citrus Acida*, and dry ginger, ground in *Thandulambu*, may be used as *Pāna*.
- viii* Rock-salt and *Pippali* (=Long Pepper) well rubbed in honey and mixed with the juice of fresh cow-dung may be administered.

Note: The cow-dung tied in plantain-leaf may be steeped in embers for some time and it may be squeezed through a cloth — to get the juice from it,

ix Take of *Arenuka* (=resin of *Altingia Excelsa*), root of *Kushta* (*Saussurea Lappa*), *Trikatu*, soot on the walls of a kitchen, rootlets and rhizome of *Helleborus Niger*, the dry tuberous root of *Aconitum Heterophyllum*, dry fruit of *Terminalia Chebula* (=ink-nut), and honey-equal weights. Grind well and administer internally in lukewarm water.

x Take of the root-bark of *Berberis Aristata* and Rock-salt — each $1\frac{1}{2}$ drachm — and *Gorochana* i. e. the purified ox-gall (*Fel Bovium Purificatum*), 5 to 10 grains, rub all and mix with the vehicle *Thandulambu*. Administer this internally.

xi The root of *Tabernaemontana Coronaria* ground in *Thandulambu* may be administered as *Pāna* as an antidote for *Rajila* poison.

FOR LEPA AS WELL AS PANA.

C Take of *Perumkurumba* (), bark of *Nim* (*Melia Azadirachta*), root of *Aristolochia Indica*, *Vyosha*, and Rock-salt, grind well in *Thandulambu* and use as *Lepa* and *Pāna*,

The above antidote may be applied to the crown of the head to cure headache or dizziness. This may also be applied into the nostrils as *Nasya*.

When the patient is very much suffering from Phlegm in throat and chest, the following are very effective remedies:—

- i Take of the *Skinned stem* of *cocculus cordifolius* and Black Pepper (*Piper Nigrum*), grind well and administer in lukewarm water internally.
 - ii Rub Black Pepper ($2\frac{1}{2}$ drachm) in sufficient ginger-juice and mix with it an equal quantity of honey. Administer internally *ad Libitum*. All phlegmatic disorders due to poison will be speedily cured.
- D** Stimulants to be applied to the eyes (*Anjana*).

When the patient becomes drowsy or when he faints,

- i Rub a few grains of the following — Long Pepper, Black pepper, dry ginger and the pulse of *Phaseolus Roxburghii* (*P. Radiatus*)— in the fresh leaf-juice of *ocimum Sanctum* and apply to the eyes.

ii Rub a few grains of the seed-pulp of Mimosa ps Elengi alone, or the same seed with black pepper, in the leaf-juice of ocimum Sanctum and apply to the eyes.

E For *Nasya*, those mentioned under Cobra and Viper Poisons may be used here also.

For Headache or giddiness caused by any kind of Snake-poison, *Elleren* prescriptions are given below:—

i The root of Aristalochia Indica, the herb Eclipta Alba (E. Erecta,) the dry rhizome of acorus calamus and asafoetida, well ground in urine or in the leaf-juice of Eclipta Alba, may be thickly put on the crown of head.

ii Sandal-paste, the fibrous root of Andropogon Muricatus, Rock-salt, root of Aristalochia Indica and *Vyosha*, well ground in the leaf-juice of Eclipta Alba may be put on the head.

iii The dried fruit of Emblica officinalis (stone removed) boiled in milk and ground well in the same may be put on the head.

iv Sandalwood paste and the skinned root-bark of Hemidesmus Indicus well ground

mixed with sufficient quantity of milk may be similarly used.

- v The root of *Indigofera Tinctoria* and a few grains of Borneo Camphor well ground in milk may be applied to the head.
- vi Rock-salt and the root of *Aristolochia Indica*, equal parts, well ground in milk may be put on the head.
- vii The herb *Herpestis Monniera*, the dried rootlets and rhizome of *Helleborus Niger* and the bulbous roots (outer skin scraped) of *Cyperus Rotundus*, well ground in milk, may be applied to the head.
- viii The skinned root-bark of *Hemidesmus Indicas* and sandal-paste, equal parts, mixed with butter (cow's) may be put on the head.
- ix Root of *Rubia cordifolia* (*R. Manjishta*) and the herb *Cynodon Dactylon*, equal parts, ground and mixed with butter may be used as *Supra*.
- x Root of *Aristolochia Indica*, the rhizome of *Nardostachys Jatamansi*, roots of *Saussurea Lappa* and of *Aswagandha* (= *Withania Somnifera*), equal parts, well ground and mixed with butter may be similarly used.

xi Bark of Nim (*Melia Azadirachta*), the herb *Cynodon Dactylon*, and the bark of *Pongamia Glabra*, well ground and mixed with butter, may be put on the head.

CHAPTER 7.

THOYA-DHARA, BATH, DIET — THINGS TO BE AVOIDED AND THE EFFECT OF IMPROPER TREATMENT.

Thoya-dhara (=flow of water) has to be performed in certain cases. The poison might not have pervaded all the *Dhatus* of the bitten person; still, he would be much perplexed and be behaving like one mad; there would be a feeling of intolerable heat; a tendency to faint; very great thirst; an *ennui* and much weakness. These are due more to the shock and fear than to poison. In such cases Thoya-dhara is to be performed.

It is done by pouring fresh and clean cold water on the head and body of the patient continuously with a vessel. This is to be continued for a time, say for one hour, more or less, until the

patient shivers with cold. His lower jaw will be shivering and the sets of teeth will be striking against each other. Then it is to be stopped and the patient's head and body are to be dried well with a towel or rough cloth. Black Pepper, fried and powdered, must be rubbed on the head.

THE BATH.

The patient under treatment may require bath on certain occasions, especially when he has had no bath for a number of days, or at other times, he will have to undergo the process of "Sweating". After "sweating" also, he will have to be bathed. This bath is to be done in specially prepared water.

a) Boil the water in which the root of *Hemidesmus Indicus*, the seed of *Acacia Speciosa*, leaves of *Gendarussa Vulgaris* and the herb *Vernonia Cinera* — all bruised — are put till $\frac{1}{3}$ portion is evaporated. Let it become lukewarm. Then sprinkle in it a few grains of the rhizome of *Acorus Calamus*, Garlic and rock-salt — all powdered. Use this water for bath.

b) Boiled water in which turmeric, bark of *Terminalia Belerica* and the root of *Aristolochia Indica* — all bruised — are put, can also be used as the water in (a) above.

The bath must be done only during the day time — never at night.

The dried fruit (seed removed) of *Emblica officinalis*, boiled in milk must be dried in the sun and powdered. A few pinches of this powder must be rubbed on the crown of the head just after the head is dried after bath.

Also, powdered dry ginger and the root of *Acacia Speciosa* must be administered internally in *Thandulambu*.

THE DIET.

The rice of the paddy which ripens in two months is, when cooked, the best food for the patients suffering from poison. Of these kinds of paddy, the special kind called *Navara* is preferable; for, it is easily digestible.

Powdered *Pippali* and dry ginger, ghce and boiled husked pulse of *Phaseolus Mungo* (Salted) must be mixed with the boiled rice. When the meal is over, he must drink a little of *Thandulambu* in which a few grains of powdered rock-salt and *Trikatu* are mixed.

Gruel also can be given. It is prepared by boiling rice in water along with some bruised dry

ginger and roots of *Amaranthus Polygamus* and of *Boerhavia Diffusa*. It must be taken in the tepid state only.

The gruel can also be prepared along with the roots of *Indigofera Tinctoria*, *Tribulus Terrestris* and *Aswagandha*.

FOR CURRY.

a) Among the vegetables, *Amaranthus Polygamus*, leaves and flowers of *Daemia Extensa*, leaves of *Acalypha Indica*; fruits of *cucumis Melo*, *Musa Sapientum* (Black Variety); *Solanum Indicum*; *Solanum Jacquinii*; White gourd melon; *Momordica charantina* and of *Trichosanthes Anguina* are good for the patient.

b) The flesh of the mongoose and the pea-cock is the best. Fish is, by no means, to be taken as it will cause complications.

Pickled ginger or lime or pickled tender mango-fruit — a year old — is better than any other curry for the patient.

In all culinary preparations it is good to use garlic, asfoetida, Rock-salt, Black Pepper, dry ginger and turmeric, since these will act as antidotes to a certain extent.

On no account the patient should use the following:—

Gingeli oil; *Pansupari*, bread prepared in oil; *Guda* (i. e. Jaggery from sugar-cane); Tamarind; cocoa-nut; mustard seed; butter-milk; curd; meat; intoxicating drink; vegetable leaves (other than those mentioned above); sugar-cane, flattened rice (*Prithuka*); jack-fruit; pulse (of *Phaseolus Roxburghii*; *Dolichos Biflorus*; *Cajanus Indicus*).

Further, he must also avoid bodily exertion and the company of his wife. He should not expose himself to smoke, sunlight, to dew and to wind or dust. He should not give himself up to emotions and excitements such as anger, sorrow, laughter and loud talk. Sleep in the day time is quite harmful.

It is good to sprinkle on the bed on which the patient lies the leaves of *Nim* and *Indigofera Tinctoria*.

THE EFFECT OF IMPROPER TREATMENT.

The physician must treat the patient so as to prevent the poison from entering the next inner *Dhatu*. If not so treated, the poison may rapidly enter the next *Dhatu*. If the antidote administered is not strong enough, then also the poison will

enter the next *Dhatu*. The effect is that the poison would affect the joints. There would be swelling at the joints ; they would be weakened ; there would be shivering, thirst, and various other ailments. As time passes on without proper treatment, the patient may also faint.

Prescriptions for treatment under such circumstances:—

- i Take the root of *Physalis minima* (or *Indica*), sliced and bruised — $2\frac{1}{2}$ tolas — put in 16 oz. of milk and pour 8 times water. Boil till the water is evaporated. The milk can be given in two doses — in the morning and evening. Do so for 3 days, or if necessary, for more days. Then the poison seated at the joints will be destroyed.
- ii *Thoya-dhara* (described *Supra*) may also be performed in this connection.

CHAPTER 8.

RAT-POISON.

Sixteen different species of rats have been described in higher works. Different kinds of

these will be more poisonous at different seasons of the year, and each sort will produce different symptoms when its poison enters the *Seven Dhatus*. The prescriptions suitable for each of them are also given. But, here, it is proposed to give only the general symptoms and the prescriptions — common to all.

HOW THE RAT-POISON ENTERS THE BODY.

The teeth and the nails of rats are poisonous. So, if they bite or scratch the body, the poison enters the blood. Or it may inject its semen, when a rat, running after its female, accidentally falls on the body; or shreds from its dead body may be unwittingly mixed up with some eatables which are kept in open vessels and which are used by people. Then the symptoms of rat-poison will *gradually* appear.

If the bitten part is seen as a scab, or if an ulcer with pain is formed, certainly there is rat poison in the body. Swelling and pain at the bitten part, head-ache, fever, stomach ache, loss of appetite, eye-disease, cold, shivering, phlegm, weakness through out the body, rash on the skin, pain increasing in the body, desire for basking in the

sun, running of the nose, retention of urine and faeces — these are some of the symptoms of the rat-poison.

WHAT OUGHT TO BE DONE AT ONCE.

1. When it is known that a rat has bitten or scratched, the leaf-juice of *Eclipta Alba* may be at once applied to the crown of the head and rubbed with the hand.
2. The leaf of *Karpas* (= *Gossypium Herbaceum*) may be ground in gingeli oil and administered internally.
3. The root of *Aristolochia Indica* rubbed in gingeli oil may be used as *Pana*.
4. Mix the leaf-juice of *Gossypium Herbaceum* — $\frac{3}{4}$ oz. with the same quantity of fresh milk — Rub and join with it *five* grains of calcium hydroxide Ca(OH)_2 . Administer the mixture to the patient internally when he stands in water neck-deep. Let him dip himself completely in water as often as possible until he shivers. Let *three* such doses be administered on *three* consecutive days. To get the rat-poison eradicated, the *first* dose of this antidote must be given within 36 hours after the poison enters the system.

If there was no opportunity to apply the above antidotes, the following ones will have to be used:—

1. The *five* parts of the herb, (viz, root, stem, leaf, flower, fruit or seed) *Amaranthus Polygamus* ground in *Thandulambu* may be administered internally.
2. The *five* parts of *Sireesha* (= *Acacia Speciosa*) ground in *Thandulambu* may be given internally.
3. The *root* of *Ankola* (= *Alangium Decapetalum*) sliced and ground in milk or *Thandulambu* may be used as *Pāna*.
4. The *root* of *calotropis Procera* well pounded and Sandal-paste — each $\frac{1}{2}$ drachm — mixed in milk ($1\frac{1}{2}$ oz.) may be similarly used.
5. Rub *asafoetida* in the leaf-juices of *calotropis gigenta*, *Datura Stramonium* and *Daemia Extensa* in a bell-metal vessel. Apply this as *Lepa*.
6. Long Pepper, Black Pepper and Dry ginger ground well may be used as *Pāna* in *Thandulambu*. This may be applied as *Lepa* also.

7. Rock-salt and Sandal-paste may be administered internally in *Thandulambu* and applied as Lepa.

8. Take of the dried fruits (without seeds) of the three *myrobalans* i. e. *Terminalia chebula*, *Emblica officinalis* and *Terminalia Belerica* — each $1\frac{1}{4}$ drachms, and the root of *Solanum Indicum*, nearly *one* drachm. Finely powder them and mix with sufficient quantity of the *milky-juice* of *Euphorbia Tirucalli* — Make small pills of the mixture — Place them in a clean enamelled vessel covering it with a cloth — Dry them in the sun and powder them — The powder may be divided into *seven* equal parts; and they may be used with ghee in the first ball of rice taken in the morning for a week.

FOR LOSS OF APPETITE DUE TO RAT-POISON: -

Take a quantity of the seeds of *sesamum Indicum* (Black variety), wet them with salt water and keep them for a few hours until they swell. By rubbing with hands, the black skin can be removed. To the seeds thus prepared add an equal quantity of dry ginger and powder them. Add to them *guda* (i. e. Jaggery from sugar-cane) equal in weight to the seeds

and mix well. From this $\frac{1}{2}$ tola weight may be eaten *ad libitum*.

Prescriptions of two powders also are given below:—

1. Take of root and flowers of calotropis gigenta, sandal-wood, dry rhizome of Acorus calamus, roots of Aristalochia Indica and of cissampelos Periera, root — bark of Berberis Aristata, Peeled bulbous root of cyperus Rotundus, *Trikatu*, dried rootlets and rhizome of Helleborus Niger, root of Ophiorrhiza Mungos and Rock-salt — equal parts — slice, dry in the sun, powder well and pass through a cloth-sieve. Half-a-tola of the fine powder rubbed with honey may be taken in the morning. Do so for 7 or 14 days.
2. Hang the leaves of Calotropis Procera in a kitchen above the hearth. When the soot due to smoke from the hearth sticks on to them thickly, take them and powder them with the soot. Mix well with it $\frac{1}{4}$ of its weight of rock-salt and $\frac{1}{8}$ of its weight of *fried* sodii Biborax — $\frac{1}{4}$ tola of this mixture (powder) rubbed in honey may be taken in the morning for 7 or 14 days according to the gravity of the rat-poison.

TO DISPERSE THE SWELLING CAUSED BY RAT-POISON.

Take of the *root* of Elephantopus Scaber, root of Asparagus Racemosus, the Scraped outside portion of naturally dried cocoa-nut kernal, and Saccharum Officinarum (Blue variety) — equal parts — fry them without being charred, grind well on a curry-stone, make a paste with lukewarm *Thandulambu* and apply as *Iepa*.

If the swelling is too much, any of those medicines mentioned for swelling in Mandali Poison may also be applied.

For *Fever* due to Rat-poison, the following decoction is prescribed:—

Take of the *tubers* of cyperus Rotundus (outer skin scraped), *fibrous root* of Andropogon Muricatus, Sandalwood, Dry ginger, Oldenlandia Herbaceae (*Parpata*) and Pavonia odorata. Prepare a decoction of these in the usual way. Strain $\frac{1}{2}$ of it and again boil down to $4\frac{1}{2}$ oz. Rub and mix one *Vilwadi Pill* and administer it in the morning. Do so in the evening also. Continue this for 7 or 14 days until the fever passes off.

The *Vilwadi Pills* are prepared thus.— Take of the *peeled root* of Aegle Marmelos, *flowers* of Ocimum Sanctum, Seed of Pongamia Glabra, *root*

of *Natha*, wood of *Cedrus Deodara*, *fruits* of the three myrobalans (*Phalatraya*), *Trikatu*, dry tubers of *Curcuma Longa*, and the root bark of *Berberis Aristata*. Reduce them to fine powder and grind with goat's urine into a pill-mass — Make it into 10 grain pills and dry them in the shade — keep them in a clean bottle (stoppered).

This pill can be administered, in various vehicles, internally in the poisons of snakes, spiders, rats, scorpions; in artificial poison and also in cholera, dysentery and fever, with much benefit.

DECOCTIONS FOR ALL KINDS OF RAT-POISON:—

- a) Take of *root* of *Indigofera Tinctoria*, *Barks* of (i) *Pongamia Glabra*, (ii) *Nim* (*Melia Azadirachta*), (iii) *Acacia Speciosa*, (iv) and *Hyperanthera Moringa*, scraped tubers of *Cyperus Rotundus*, Dry rhizome of *Acorus calamus*, Dry ginger, wood of *Cedrus Deodara* and sandal-wood — Prepare a decoction of these in the usual way and use every morning and evening for 7 or 14 days.
- b) Take of *root* of *Cissampelos Periera*, *bark* of *Acacia speciosa*, root of *Ophiorrhiza Mungos*, dry rhizome of *Acorus calamus*, dry tubers of *Curcuma Longa*, root of *Saussurea Lappa*,

scraped tubers of cyperus Rotundus, dry ginger and peeled-root of Glycyrrhiza Glabra, and prepare a decoction in the usual way. This also may be given as (a).

- c) Take of the *five* parts of *Acacia speciosa* (A-sirish), *Trikatu*, root of *Aristolochia Indica*, dry rhizome of *Acorus calamus*. Dry fruits of *Terminalia Chebula*, sandal-wood, *Aswagandha* (dry root of *withania somnifera*), root of *Natha*, fibrous root of *Andropogon muricatus*, scraped tubers of cyperus Rotundus, and the bark of *Nim* (*Melia Azadirachta*), and prepare a decoction in the usual way. With each dose mix 3 pinches of powdered rock-salt (*Saindhava*,) — Administer this in the morning.

MEDICATED OILS FOR THE BATH OF PATIENTS OF RAT-POISON.

1. The juice of 16 palams of *cynodon Dactylon* in $4\frac{1}{2}$ gallons of water must be mixed with $2\frac{1}{2}$ pints of gingeli oil and 30 drachms of *Kalka* of the root of *glycyrrhiza glabra* (see the general method of preparing oil,) — Boil away the water and strain the oil when the *Kalka* comes to *Kharapaka*.
2. The medicated gingeli oil can also be prepared in the juices of *Eclipta Erecta* and the skinned

stem of fresh *cocculus cordifolius*. 8 palms of each must be taken — The process is exactly similar to (1) above.

The above oils may be used for the bath of the patient.

After the bath powdered dry ginger must be given internally in *Thandulambu*.

When the patient is suffering from various ailments due to rat-poison, it is beneficial to give him a purgative or an emetic.

Preserptions (Purgatives).

- i Castor oil mixed with milk may be given.
- ii The powdered root-bark of *Ipomoea Turpe-
thum* (*Trivrit*) — $1\frac{1}{2}$ drachm — may be administered in luke-warm water.

The purging may be stopped by giving sandal-paste in water; or by taking curd or butter-milk with common salt and *fried paddy* (*Lāja*).

When the rat-poison in the body has become chronic, medicated ghee must be taken by the patient regularly for some months.

- 1 Take of the *roots* of *Aristolochia Indica* and of *Ophiorrhiza Mungos*, slice, bruise and boil in water till the water is reduced to $\frac{1}{4}$. Mix

with it ghee equal to $\frac{1}{4}$ of the above decoction and the *Kalka* (paste) made of *Trikatu*. Boil till all the water is evaporated and the *Kalka* heated to *Mridupaka* — Strain the ghee.

Use $\frac{1}{2}$ to 1 tola of this, according to the digestive power every morning — Avoid tamarind and red pepper (chili) in the diet.

2. Take of the roots of *Gmelina Arborea* and of *Saussurea Lappa* — Prepare a decoction as described above, add ghee and cow's urine (equal parts) and the *Kalka* made of the peeled-root of *Glycyrrhiza Glabra* and dry grapes — Boil the water away and strain the ghee when the *Kalka* is heated to *mridupaka* — Use this also as before.

3. The ghee may be prepared in the juice of *Herpestis monniera* as in the previous case.

CHAPTER 9.

1. SCORPION-POISON AND ITS ANTIDOTE:—

It is said that scorpions are born of cow-dung, or poisonous materials or snakes when these are putrefying. These may be divided

into *three* kinds, viz (1) Those having many joints on their tails, or (2) three joints or (3) one or two joints. The last one is the most poisonous.

Though the symptoms of the stings of the different kinds are different, the general symptoms may be given thus:— Shivering, vomiting, sweat, excruciating pain on the bitten part, fever, hair standing on end, swelling pain, redness at the bitten part and much perplexity.

Before applying any antidote it is beneficial to remove the blood from the part stung by means of leeches or horn. After that,

i Take of *Aswagandha* (the dried root of *withania somnifera*) and the bark of *Pongamai Glabra*, equal parts, pound well in *Thandulambu* and administer internally. This may be applied into the nostrils as *Nasya*.

ii Take of the *bark* of *Bergera Koenigii* (curry leaf tree) and black pepper, equal parts, grind well and mix it in sufficient quantity of sour butter-milk (cow's), make it lukewarm, and with this perform *Dhara* for at least $1\frac{1}{2}$ hours,

iii Rub a few grains of Rock-salt in the mixture of the leaf-juices of *Pongamia Glabra*, *Tamarindus Indica* and *Strychnos Nux vomica*, and apply the mixture into the eyes as *Anjana*.

iv The leaf of *Pongamia Glabra* alone may be well ground and applied as a poultice externally on the part stung — The leaf-juice may be applied, at the same time, into the eyes and the nostrils ; also may be given as *Pāna*.

v *Asafoetida* rubbed in the leaf-juice of *Betel* (*Piper Betel*) placed in a bell-metal vessel may be applied externally — This also can be applied to the eyes and the nostrils ; also taken internally.

Dhoopas i. e. fumigations, or smoke coming out of certain medicines, well bruised can be directed to the particular spot, and this is another form of external application (*Lepa*). The following *Dhoopas* are found to be effective in scorpion stings:—

i Take of the feather of chicken, Rock-salt (*Saindhava*), and the seeds of *Sesamum Indicum*, equal parts, bruise well, mix with a little ghee and place it in a vessel, say, a cocoa-nut shell. Put some hot embers, say of cocoa-nut

shell, and invert over it another shell with a hole — The part stung may be exposed to the smoke emerging out of the hole.

ii Take of the leaf of Nim (*Melia Azadirachta*), dry tubers of curcuma Longa (turmeric), human hair, husk of paddy (*Oryza sativa* seed), leaf of *Euphorbia Tirucalli*, the herb *cardiospermum Helicacabum*, and the leaf of *Palmyra* tree (*Borassus Flabelliformis*), equal parts, bruise well, and add ghee. It may be used for applying the smoke as in the previous case.

iii The root — bark of *Berberis Aristata* and *asafoetida*, bruised, and mixed with ghee, also may be used for smoking.

2. SPIDER-POISON AND ITS ANTIDOTE: —

Spiders are said to be of *twenty-four* varieties of which *four* are most venomous, so much so that their virulent poison is considered to be incurable.

They eject their poison in *Eight* ways, viz, in breath excreta, urine, semen, in their spittle, in the liquid forming the menstrual course, with teeth and with nails — The poison may come in contact with the human body directly or indirectly by using the things on which the spider has already deposited the poison.

The general symptoms for all kinds of spider-poison are the following:— At the spot where the poison has come in contact with the body, there will be portules (capsules), swelling, small granular eruptions all round, excessive pain as if pricked with a pin, headache, change of colour — red to black — and high fever.

PRESCRIPTIONS.

By applying leeches blood may be removed from the part affected — Then,

- i Take of the leaf of *Ocimum Sanctum* and the fresh tubers of *curcuma Longa* (*Turmeric*) and grind them well in milk — This paste may be applied externally as often as the previous coating dries — The same may be used as *Panā* also for 3 or 7 days, according to the gravity of the poison,
- ii *Asafoetida* rubbed in the leaf-juice of *Betel* in a bell-metal vessel may be applied as *Lepa* — The granular eruptions will disappear.
- iii A fruit of *Datura Stramonium* half-filled with rock-salt, closed and tied, boiled in *Thandulambu* in an earthenware vessel also closed, and ground well in the same liquid so as to form a paste may be applied as *Lepa*.

- iv The roots of *Acacia speciosa* and *Indigofera Tinctoria*, cut into slices, bruised and well ground in the leaf-juices of the above plants may be used as *Lepa* and *Panà*.
- v All portions of the herb *Amaranthus Polygamus* may be well ground in milk or *Thandulambu* and used as *Lepa* and *Panà*.
- vi Take of the root of *Indigofera Tinctoria*, Sandal-wood, the fibrous root of *Andropogon Muricatus*, and the root of *Saussurea Lappa* (*Kushta*), grind in milk and use as in (v).
- vii Take of the peeled root—bark of *Hemidesmus Indicus* and the root of *Indigofera Tinctoria*, slice, bruise and grind in milk or *Thandulambu* — Administer internally — Perform *Dhara* also.
- viii The leaf-juices of fresh *Momordica charantia* (wild variety) and *ocimum Sanctum* may be used as *Anjana* and *Nasya*.
- ix Bruise the bark and the leaf of *Pongamia Glabra*, put them in water and boil it for some time — when it becomes sufficiently cooled, use it to wash the itch formed by spider poison.

Note: *Gingeli* oil must be strictly avoided by one suffering from spider poison — But in its place medicated cocoa-nut oil may be used.

Those who are accustomed to take oil-bath may use the following one for applying to their heads.

Fresh tubers of *curcuma Longa* and the leaves of *Ocimum Sanctum*, each $1\frac{1}{4}$ drachm, well bruised, may be put in 16 oz. of cocoa-nut oil and boiled till the watery portion is evaporated — This can be used for the head.

There is another medicated preparation of cocoa-nut oil called *Neeleedaladi* found to be very effective in all cases of spider poison — This may be applied externally, not only at the parts affected but to the whole body. It is prepared thus:—

Take of the *leaves* of *Indigofera Tinctoria*, of *ocimum Sanctum* and of *Gendarussa vulgaris*, each $5\frac{1}{2}$ palams, bruise and squeeze in $1\frac{3}{5}$ gallons of water thrice — Strain the liquid through a cloth — sieve; for *Kalka* take of the bulb of *allium Sativum* (garlic), Long pepper, black pepper, dry ginger, *withania somnifera* (*Aswagandha* root) Sandal-wood, peeled-root of *Glycyrrhiza Glabra*, root of *Saussurea Lappa* (Kushta), peeled root — bark of *Hemi-*

desmus Indicus, root of Aristalochia Indica, and *Takaram* root, total 30 drachms, and mix with it along with 3½ pints of cocca-nut oil — Boil away the water and strain the oil, when the *Kalka* is heated to *Kharapaka*.

When the poison has become chronic, medicated ghee must be taken for two months.

The medicated ghee can be prepared just like the oil (above). Only instead of cocoa-nut oil, ghee must be used — It must be strained when the *Kalka* is heated to *Mridupaka*.

Both the oil and the ghee can also be prepared in the decoctions of the roots of Indigofera Tinctoria, Ocimum Sanctum and Gendarussa vulgaris made in the usual way — if the leaves are not available.

3. MUNGOOSE-POISON AND ITS ANTIDOTE:

SYMPTOMS:

Muscles of the neck become powerless to hold the head erect; teeth, lips and palate become black; words come out only with impediment; eyes redden; and high fever.

PRESCRIPTIONS.

- i Take of root, leaf, fruit and flower of *Daemia Extensa* (i. e. *Asclepias Echinata*) in equal parts, grind in *Thandulambu*, apply as *Lepa* and administer internally.

- ii Take of the *root* and *leaf* of *Indigofera Tinctoria*, grind in *Thandulambu* and use as *Lepa* and *Pâna*. This is very effective.
- iii The root and leaf of *Gendarussa vulgaris* can also be used as (ii) above.

If the poison has become chronic, medicated ghee prepared with any of the above herbs may be given for a number of days, with great benefit.

4. CAT-POISON AND ITS ANTIDOTE.

SYMPTOMS:

There will be an itching sensation at and around the part bitten or scratched by the cat; all around there will be granular eruptions; the palate and the navel will be blackened; fever; vomiting; sweating.

PRESCRIPTIONS:

- i Take of the *root* of *Ricinus communis*, dried fruit (with seed removed) of *Terminalia chebula* (chebulic myrobalan) and *fried* *sodii Biborax*, equal parts, grind and rub them well in honey, apply externally and also administer internally.
- ii *Vyosha* and Rock-salt, powdered and rubbed in honey, may also be used as above.

iii A few grains of asafœtida rubbed in the leaf-juice of *Eclipta Erecta* in a bell metal vessel may be applied externally.

If the poison has become chronic, medicated ghee prepared with the above medicines, viz, root of *Ricinus communis*, fruit of chebulic myrobalan, and sodii biborax, or Long Pepper, black pepper, dry ginger and rock-salt may be administered internally for a few days.

5. DOG-POISON AND ITS ANTIDOTE.

Dogs may be considered under two aspects, viz, non-rabid and rabid.

The wound caused by dog-bite will contain dark clotted blood; there will be the flow of blood also; fever; swelling; fear of crowd; foul odour of the body; weakness of joints; head-ache; either diarrhoea or retention of faeces — these are the general symptoms.

PRESCRIPTIONS:

- i* Take of the *root* and the *bark* of *Alangium Decapetalum*, equal parts, grind in *Thandulambu*, apply as *Lepa* and administer internally.

- ii Medicated gingeli oil, ghee and *Loha* can be prepared with the root and the bark of *Alangium Decapetalum*.
- iii Administer internally the decoction of the root of *Indigofera Tinctoria* with Rock-salt.

HOW THIS DECOCTION IS PREPARED.

Cut into small pieces the *root* of *Indigofera Tinctoria*, 5 tolas ; bruise well and boil it in one *Dravaprastha* of water till the water is reduced to $\frac{1}{4}$ its bulk i. e. 16 oz. Strain *half* of it and boil it down to 6 oz.—Rub and mix 3 pinches of rock-salt and administer it internally in the morning. Do so with the other half in the evening. Do thus for 7 days.

- iv Take of the *leaf* of *Hyperanthera Moringa*, tubres of *curcuma Longa* (Turmeric), and the root-bark of *Berberis Aristata*, grind well in sufficient quantity of the juice of the herb *cynodon Dactylon* and apply externally.
- v Bruise well in a mortar 16 palams (80 tolas) of the herb *cynodon Dactylon* and express the juice in $1\frac{3}{4}$ gallons of water thrice. Filter the liquid through a cloth-sieve — with this mix the fine paste (*Kalka*) formed of the peeled-root of *Glycyrrhiza Glabra*, Sandal-wood, and mace

(= the arillus of *Myristica Fragrans*) — each 10 drachms — Pour $3\frac{1}{2}$ pints of cocoa-nut oil also and boil, till the paste is heated — *Khara paka* — Strain the oil.

Perform *Dhara* with this oil, when cooled, on the wound.

When the wound is caused by a rabid-dog, it must be cauterised at once, and the patient must be given a purgative, (or an emetic) — The purgative medicines are as described under rat-poison.

The foilowing decoction must be administered internally in the morning for three months continuously.

Take of the *roots* of *Pongamia Glabra* and *Indigofera Tinctoria* — Prepare a decoction of these — When it becomes cool, add 6 drops of honey and administer internally.

The patient must be careful in his diet. He must avoid sour things such as tamarind, and red pepper ; should not exert himself and perspire ; should not sleep in day time.

In non-rabid dog bites as well as in jackal-bites — both rabid and non-rabid — the above decoction may be used.

6. POISON CAUSED BY HORSE-BITE AND ITS ANTIDOTE.

SYMPTOMS:

Pain on the bitten part ; flow of blood ; weakness in all the limbs ; difficulty to open the eyes ; thirst ; much perplexity.

Take of the dry rhizome of *Acorus Odoratus*, aswagandha root (*withania somnifera*) and the bark of *Symplocos Racemosa*, equal parts, grind in milk, apply externally and administer internally.

7. MONKEY-POISON AND ITS ANTIDOTE.

SYMPTOMS:

Excessive pain on the bitten part ; lips and teeth will be blackened ; dark blood flows out of the wound ; the body will become weak ; the hair stands on end ; change of colour in the body.

PRESCRIPTION:

The five parts, viz, root, bark, leaf, flower and fruit (seed) of *Acacia speciosa*, ground in *Thandulambu* may be used as *Lepa* and *Pâna*.

8. HUMAN-BITE AND ITS ANTIDOTE.

Meat eaters are more poisonous than pure vegetarians.

SYMPTOMS:

Fever ; weakness in the limbs ; blackening of lips and teeth ; heaviness and pain at the joints ;

flow of saliva; change of colour on the face, reddening of eyes; and in course of time, dumbness.

PRESCRIPTION:

Take of the root of *Indigofera Tinctoria*, the skinned root-bark of *Hemidesmus Indicus* and the herb *Amaranthus Polygamus*, cut into small pieces, grind in milk and use as *Lepa* and *Pàna*. This may be used as *Anjana* and *Nasya* also. Each one of the above herbs is beneficial; so, all the three together would be more effective.

9. FROG-POISON AND ITS ANTIDOTE.

SYMPTOMS:

Itching sensation at the bitten part; capsular eruptions all around; high fever; dejection; pain; swelling.

PRESCRIPTION:

Take of *Thriyooshana* and asafoetida, grind in *Thandulambu*, and use as *Lepa* and *Pàna*.

**10. GREEN HOUSE-LIZARD (*LACERTA INTERPUNCTULA*) —
POISON AND ITS ANTIDOTE:**

SYMPTOMS:

Rashes will appear on the skin; they may be of black or red colour; fever; excessive pain; weak-

ness in body ; loss of appetite ; cold ; foul breath ; retention of faeces.

PRESCRIPTIONS.

- i* Take of the *barks* of Nim (*melia Azadirachta*) and of *Pongamia Glabra*, cut into small pieces and grind in *Thandulambu* — This may be smeared all over the body ; may be used as *Pāna* also.
- ii* The *bark* of *Acacia Speciosa* can be similarly used.
- iii* The *barks* of *oroxylum Indicum* and of *Hyperanthera Moringa* can also be used as *supra*.
- iv* Take of the root of *Aristolochia Indica*, sliced, and the soot from kitchen walls, pound and mix them well in the juice of *cynodon Dactylon*, and smear all over the body.
- v* The decoction of the root of *Indigofera tinctoria* prepared in the usual way may be administered internally for 14 days.

11. POSION OF CHAMELION AND ITS ANTIDOTE.

The symptoms and prescriptions are almost the same as in the case of green house-lizard poison.

12. LIZARD-POISON AND ITS ANTIDOTE.

Rashes on the skin; itching sensation; bowel-complaints; and parched lips are the symptoms.

PRESCRIPTIONS:

- i Take of the root of *Indigofera Tinctoria* and the peeled root-bark of *Hemidesmus Indicus*, grind in *Thandulambu* and use as *Lepa* and *Pāna*.
- ii The roots of *Aghori* and of *Aristalochia Indica* can be similarly used.

13. HORNET-STING AND ITS ANTIDOTE:

SYMPTOMS:

Swelling-pain; swelling; hair standing on end; weakness in all the limbs.

PRESCRIPTION:

- i The whole herb, *Muckutti* (*Desmanthus Natans*, a small sensitive plant with yellow flowers) ground and mixed with equal weight of cow's butter must be well rubbed in a wide plate with the palm so that the watery portion evaporates. This may be smeared over the whole body and a portion administered internally.
- ii (a) The herb *Hedyotis Heynei* or (b) the root and the leaf of *Indigofera Tinctoria* or

(c) the root and the leaf of *Ocimum Sanctum*, ground and rubbed with butter can be similarly used.

14. POISON OF MILLIPEDE AND ITS ANTIDOTE.

SYMPTOM:

The epidermis in the round rash formed gradually wears out; granular eruptions would be formed inside the circular spot; there would be an itching sensation also at the spot — The rash would widen gradually.

PRESCRIPTIONS.

- i Take of *Trikatu*, and the five parts of *Acacia Speciosa*, grind in *Thandulambu*, and use as *Lepa* and *Pàna*.
- ii Take of the leaf of *Puttarichunda* (= *Gentiana Chirayta*) and the tender bract of *Ketaki* (= *Pandanus odoratissimus*), cut them into small pieces and fry them in just sufficient quantity of cocoa-nut oil — Grind well in the same oil and apply it as *Lepa*.

15. EAR-SNAKE POISON AND ITS ANTIDOTE.

The poison of the ear-snake may be treated like that of the millipede — Besides, the herb *Amaranthus Polygamus*, ground in *Thandulambu*, may be used as *Lepa* and *Pàna*.

16. LEECH-POISON AND ITS ANTIDOTE.

An itching sensation and the oozing of blood are the symptoms of leech-poison.

Turmeric powdered (= dry tubers of *curcuma Longa*), the peeled root-bark of *Hemidesmus Indicus* well ground, and ghee are its antidotes — These may be applied externally.

17. WASP OR BEETLE OR BEE-STING AND ITS ANTIDOTE.

Swelling-pain, and swelling are the symptoms of the Bee-sting.

Take of the sliced root of *Cassia Sophora*, dry tubers of *curcuma Longa* and the root-bark of *Berberis Aristata*, grind in Thandulambu so as to form a paste and apply it externally.

18. CENTIPEDE POISON AND ITS ANTIDOTE.

The ripe-leaf which has fallen from jack-tree well ground in the leaf-juice of *Leucus Aspera* or in gingeli oil may be externally applied.

19. CROCODILE POISON AND ITS ANTIDOTE.

Take of mustard seed, long Pepper, Black Pepper, roots of *Saussurea Lappa* and of *Achyranthus Aspera*, *Aswagandha* (*withania somnifera*), roots of *Solanum Indicum* and of *Thakaram*, grind in goat's milk and apply externally.

20. FISH-POISON AND ITS ANTIDOTE.

When certain kinds of fish bite or otherwise inflict wound, there will be swelling pain, swelling, and fever; and the hair stands on end.

PRESCRIPTIONS:

a) To remove pain:

i Take of the sliced *root* and the tender leaf of *strychnos Nux-vomica*, equal parts, — *one palam* each — bruise well and boil in $4\frac{1}{2}$ pints of water till $\frac{1}{3}$ of the water is evaporated — When it is cooled and becomes lukewarm, perform *Dhara* for $1\frac{1}{2}$ hours.

ii The whole herb *Gynandropsis Pentaphylla* bruised may be boiled in water (Proportion: 1 *palam* in $2\frac{2}{3}$ pints) till the water is reduced to $\frac{1}{4}$ — The part may be fomented with this decoction to remove the swelling-pain.

TO DISPERSE SWELLING.

iii Take of the herb *Gynandropsis Pentaphylla*, *Trikatu*, *asafoetida*, root of *Boerhavia Diffusa*, the wood of *cedrus Deodara*, cut into small pieces, bruise, grind in *Thandulambu* to form a paste, make it lukewarm and apply externally.

ANTIDOTE FOR THE POISON.

iv Take of the skinned stem of *cocculus cordifolius*, and *Dasapushpa*, slice, boil in sufficient

quantity of milk, grind in the same milk and apply externally on and around the wound.

CHAPTER 10.

STAVARA POISON AND ITS ANTIDOTE.

Stàvara Poison is produced from *ten* sources — These are the leaf, fruit, flower, bark, gum (resin), rhizome, root, milky exudation, seed and leaf-juice of various plants.

SYMPTOMS:

Feeling of heat · swelling; fever; dejection; weakness; swooning; vomitting; emaciation of body; retention of urine and faeces.

The poison enters the system when the different parts of plants are unwittingly eaten as food, or along with food or when they are taken internally as medicines without being properly purified if they are to be done so.

PRESCRIPTIONS:

- i A proper purgative must be given.
- ii The root, stem and leaf of *Amaranthus Polygamus* ground in *Thandulambu* may be administered internally and smeared over the body.

- iii The root of *Indigofera Tinctoria*, sliced, and rock-salt, equal parts, may be similarly used as above.
- iv Medicated oil and ghee may be prepared with the above herbs, viz (i) *Amaranthus Polygamus* and (ii) *Indigofera Tinctoria* in the usual way. *Kalka* for these:— Rock-salt, *Trikatu*, dry turmeric and the root-bark of *Berberis Aristata*.
- v “*Satadhautaghrita*”, when given internally is effective in all kinds of *Stavara* poison—It is prepared thus.

First make a decoction of the *barks* of *four* milky trees — total 5 tolas ; — *One palam* of cow's butter must be rubbed with a portion of the above decoction in a wide shallow dish with the palm till the decoction is evaporated. Then pour some more of the decoction and repeat the process — Continue to do so without interruption until the whole decoction is used up. This *red* ghee may be administered internally (Dose $\frac{1}{2}$ tola to $\frac{1}{2}$) daily.

This ghee is not only an antidote for plant poison, but it also removes the burning sensation and swelling.

**SPECIAL ANTIDOTES FOR CERTAIN PLANT POISONS,
MINERAL POISONS AND OTHER OBJECTS.**

1. Certain persons, when they pass close to the tree *Semecarpus Anacardium*, or on the lee-ward side of it, or when they touch the tree, have the idiosyncrasy of being affected with its poison.

The best antidote is the bark of *Terminalia Belerica* (i. e. *Beleric myrobalan*). It may be ground well in *Thandulambu* and smeared over the body, and internally administered.

A purgative of the root-bark of *Ipomea Turpethum*, ground well, may be administered in lukewarm water.

If the purging is excessive, water in which the bruised root of *Asparagus Racemosus* is boiled may be used for drinking, bathing and pouring on the anus.

The above purgative may be given for the poison of *Nagadanti* also (*Jatropha Montana*).

2. The hairs on the pods of *Mucuna Pruriens* produce an intense irritation of the skin. The bark of *Thespasia Populnea* ground in *Thandulambu* may be externally applied as an antidote.
3. For the poison of *Ganja* (*Canavis Sativa* or *C. Indica*) or the various preparations from it,

the fruit of *Cephalanda Indica* may be administered internally.

4. For the poison of opium (=Afin), the root and leaf of *cephalanda Indica*, equal parts, may be given internally, well ground, in the vehicle *Thandulambu*.
5. For the poison of tubers of *Gloriosa Superba*, each of the following is an antidote, viz, (i) the root of *Indigofera Tinctoria* (ii) the tubers of *Delphinium Denudatum* and (iii) Black Pepper.

These, well ground, may be administered internally either in *Thandulambu* or in the form of decoction.

6. For Arsenic poison also, the above (5) may be given — But the seeds of *Brassica Nigra* (Black mustard) well ground in *Thandulambu* is the most effective antidote.

The root of *Indigofera Tinctoria* as well as the root-stock of *Nelumbium Speciosum* may also be given in the form of decoction as antidotes for arsenic Poison.

7. For mercury poison, the juice of the fruit of *Beninkasa cerifera* is an antidote.

8. If the tender leaves of *Strychnos Nux-vomica* are taken internally in over-doses, as for example, in the prescriptions of quacks, for Gonorrhea, tetanus sets in the muscles of hands, legs and phalanges ; there would be convulsions ; and the two rows of teeth become locked against each other.

PRESCRIPTIONS:

- i* The tender leaves of *Plumbago Rosea* well ground in *Thandulambu* may be administered internally — It may also be applied into the eyes, nostrils and navel ; and may be rubbed over the whole body.
 - ii* The tender leaves of *Abrus Precatorius* may be similarly used.
9. For the poison of *Vatsanabha* (*Aconitum Ferox*), the decoction made of the tubers of *Delphinium Denudatum*, or that of the root of *Indigofera Tinctoria*, is the antidote.
10. For the effect of to-bacco (leaves of *Nicotiana Tabacum*), the expressed milky juice of the kernel of cocoa-nut may be administered internally, and applied on the head, into the eyes and into the nostrils.

11. If too much gingeli oil or medicated oil is taken in, a solution of common salt is the antidote.
12. For the stomach complaints produced by the excessive eating of Jack-fruit, powdered dry ginger may be given. The decoction prepared of the herb *Heliotropium Indicum* also is effective.
13. The intoxication produced by toddy or other alcoholic drinks can be neutralised by the internal administration of the fruit-juice of *Citrus Acida*.
14. The ill-effect of excessive use of curd or sour butter-milk can be counteracted by the use of old pickled-tender-mango with its seed.

The herb, *Indigofera Tinctoria*, with its different parts, in the form of decoction, may be given as an antidote for all kinds of poison.

CHAPTER 11.

TREATMENT FOR COWS.

When a cow is bitten by a snake, the following symptoms are seen in it: — Shaking of the head

hair standing on end; swelling on the bitten part
weakness of limbs; dimness of vision; inability
to walk; foam coming out of nostrils and mouth;
setting of teeth firmly against the opposite side;
coming out of hair from the skin easily.

In the treatment of cows, the medicines are
almost the same as prescribed for human beings.
Only the dose given must be *four* times the dose
given to man. When the cow swoons, the *Nasya*
and *Anjana* prescribed for human beings may be
applied.

i Cauterize the wound with a red-hot piece
of iron.

ii Cow's ghee and powdered rock-salt well
boiled and sufficiently cooled may be applied
externally on the wound.

iii Take of the dry rhizome of *Acorus odoratus*,
Vyosha and rock-salt grind well in *Thandu-*
lambu, and apply externally (locally) and
administer internally.

iv Take of the *five* parts of *Sirish* (*Acacia*
Speciosa), viz, root, bark, leaf, flower seed;
the root of *Indigofera Tinctoria*; the herb
Amaranthus Polygamus, dry tubers of *curcuma*

longa (turmeric) and the root-bark of *Berberis Aristata*, grind well in *Thandulambu* and rub over the whole body; administer internally also by forcibly opening its mouth.

v Take of the leaf of *Indigofera Tinctoria*, Rock-salt, root of *withania somnifera* and leaf of *Acalypha Indica*, grind well in *Thandulambu*, apply externally and administer internally.

vi Take of the root of *Acacia Speciosa* sliced, the bulb of *Allium Sativum*, asafoetida, the rhizome of *Acorus odoratus* and Black Pepper, equal parts, grind well in *Thandulambu* and use as before (v).

vii Take of the bark of *Pongamia Glabra* sliced, root of *Aristolochia Indica* sliced, *Thrikatu*, grind well in *Thandulambu*, apply externally and administer internally.

CHAPTER 12.

A GENERAL TREATMENT FOR ALL KINDS OF POISONS:

INTRODUCTION:

If the nature of the snake is not known from the signs and symptoms (mentioned supra), the patient must be well observed.

From the colour, the predominant *Dosha* viz, Vatha, Pitta or Kapha and from the 'Vaga' of poison; if the nature of the poison is not yet understood, the following various prescriptions are given for *Lepa*, *Pana*, pills for Nasya, Anjana, for fumigation etc. These prescriptions are antidotes for all kinds of poisons, *Starara* and Jangama.

1. Take of the *leaf* and the *flower* of *Daemia Extensa* (or its root), grind well in cow's milk and administer internally for all kinds of Poisons.
2. The root of *Indigofera Tinctoria* sliced and ground well either in milk or in *Thandulambu* may be used as *Lepa* and *Pana*.
3. Take of the roots of *Amaranthus Polygamus* and of *Indigofera Tinctoria*, grind well and use as *Lepa* and *Pana*.
4. Take of the root of *withania somnifera*, tubers of *curcuma Longa*, root-bark of *Berberis Aristata* and the root of *Amaranthus Polygamus*, grind well either in milk or in pure cold water, and use it as *Lepa* and *Pana*.
5. Take of the *roots* of *Pongamia Glabra*, *Indigofera Tinctoria* and *Melia Azadirachta* and use it as *Lepa* and *Pana*.

6. Take of the dry rhizome of *curcuma Longa*, root-bark of *Berberis Aristata*, root of *Amaranthus Polygamus* and the soot scraped from the walls of kitchen, grind well and use as *Lepa* and *Pana* — for both *Starara* and *Jangama* Poison.
7. Rub *fried Sodii Biborax* in pure cold water. Administer internally—Apply externally (locally). Also apply this into the nostrils as *Nasya*.
8. Take of the root of *withania Somnifera* *Thrikatu*, dry rhizome of *Acorus calamus*, and the root of *Acacia Speciosa*, and grind well in the juice of the corm of the plantain (*Musa Sapientum*) This may be used as *Lepa*, *Pana*, *Nasya*, and *Anjana*.

Then the poison will be destroyed and swelling dispersed.
9. Take of the root of *Aristolochia Indica* and dry ginger — grind well. This may be used as *Lepa*, *Pana* and *Nasya*, and also for applying thickly on the head — in all poisons.
10. Take of the root of *Amaranthus Polygamus*, root of *withania somnifera*, *Gugul* i. e., the gum of *Balsamodendron Mukul* — purified,

and the soot from the wall of kitchen—grind well in cow's urine and administer internally.

Note:—The gugul-gum is purified by exposing it in the steam arising from a closed vessel in which water containing bruised Nim-leaf is boiled.

11. Take of sandalwood, and the *roots* of Indigofera Tinctoria, of amaranthus Polygamus and of Saussurea Lappa and grind well in cow's milk. This may be used as *Pana* and *Lepa*.
12. The ripe-leaf of calotropis Gigenta and rock-salt or assafoetida (Proportion 4 : 1) well ground in urine (human) may be used as *Lepa* and *Pana*.
13. Take of seeds of Acacia speciosa, seeds of calotropis gigenta, long pepper, black-pepper, and dry ginger and grind well. This may be used as *Lepa*, *Pana*, *Nasya* and *Anjana*.
14. Take of stick lac, asafoetida, dry ginger, bulb of Allium sativum, dry rhizome of curcuma Longa, the root-bark of Berberis Aristata and rock-salt, grind in urine and use as *Lepa*, *Pana*, *Nasya* and *Anjana*.
15. Take of Trikatu, seeds of Calophyllum wightianum (or the skinned root-bark of Hemi-

desmus Indicus), root of Indigofera Tinctoria and the tubers of cissampelos Periera and use as above (14)

16 Take of *Vyosha*; root of Aletris hyacinthoides and dry tubers of Acorus calamus, and use as the previous one.

17. The fruit of Strychnos Potatorum well ground in water must be mixed with water. Dip a clean piece of cloth in it and then dry it in air. Again dip it in the liquid and dry. Do so 8 or 10 times. Dip the cloth in a little gingeli oil and squeeze it in the oil. With this oil perform *Nasya*. The patient wakes up.

18 Take of the dry fruit (with stone removed) of Terminalia chebula, the barks of symplocos Racemosa, of Nim (melia Azadirahcta) and asafoetida, grind well and use in various ways as *Lepa*, *Pana*, *Nasya* and *Anjana*.

19. The bark of Erythrina Indica well ground may be used as *Lepa* and *Pana*.

FOR NASYA AND ANJANA.

20. Take of *Vyosha* and asafoetida, rub well in the leaf-juice of Leucus Aspera and use as *Nasya* and *Anjana*.

21. Take of the seed of *Abrus Precatorius*— (white variety—after removing the outer hard shell), *Asafoetida* and the seed of *Minmusops Elengi* (after removing the plumule), grind well in the leaf-juice of *Hyperanthera Moringa*, and use it as *Nasya* and *Anjana*.
22. Take of the dry rhizome of *Acorus calamus*, *Asafoetida* and black-pepper (with its outer rind removed when it is ripe), rub them in the leaf-juice of Betel and use this for *Nasya* and *Anjana*.
23. Black-pepper (with its outer rind removed when ripe) becomes white in colour. This pepper must be soaked in the flower-juice of *Acacia speciosa* at night and dried in the sun in the day time. Again soak this in the same juice at night and dry it in the sun. Do so 8 or 10 times. A few grains of this pepper rubbed in the same juice or in breast milk, as occasion arises, may be used for *Nasya* and *Anjana*.
24. Take of the seed of *Abrus Precatorius*— white variety, tubers of *Gloriosa superba* *Asafoetida* and dry rhizome of *Acorus odoratus*,

grind well, and use in various ways, as *Nasya Anjana* etc.

25. Take of the rhizome of *Acorus odoratus*, root of *withania somnifera*, *Thrikatu*, sandalwood, and the root of *Acacia speciosa*, grind in the watery-juice of the corm of Plantain and use as *Pana*, *Lepa*, *Nasya* and *Anjana*.

26. Take of the seed of *Pongamia Glabra* (after removing the plumule), *Trikatu* the bark of Nim and the root of *Aristolochia Indica*, grind well and use in various ways.

27. Take of the root of *Luffa Echinata*, rhizome of *Acorus odoratus*, *asafoetida*, root of *Acacia speciosa*, and *Trikatu*, grind well in the milky exudation of *calotropis gigantea* or in goat's urine.

a) A few grains of this, rubbed in the leaf-juice of Betel, may be applied to the eyes. (*Anjana*).

b) Rubbed in the leaf-juice of *Leucus Aspera*, this may be used for *Nasya*.

c) Rub the same in the juice of the bark of *Hyperanthera Moringa* and administer internally (*Pana*)

28. Asafoetida rubbed in the juice got by squeezing the bruised herb *citrullus colocynthis* may be used for *Nasya* to wake up the patient.
29. The root of *crotolaria verrucosa* may be used for *Pana*.
30. Take of *Trikatu* and dry ripe seeds of *Elettaria cardamomum*, powder them well, and mix with the juice of the herbs, viz, *cacalia Souchifolia*, *Leucus Aspera*, *ocimum sanctum*, *vernonia Cinerea*, *cardiospermum Helicacabum* and the leaf of *Acalypha Indica*, taken in equal parts, bruised and squeezed. This may be licked and eaten as an antidote for all poisons.
31. The itches or sores caused by poison will be cured by the following:—
- a) Take of the root of *Acorus odoratus*, root of *Thakaram* (*Tabernoemontana coronaria*) root of *saussurea Lappa*, sandalwood, stamens of *Nelumbium speciosum*, seeds of *Datura stramonium*, grind well so as to form a paste and apply externally.
- b) Take of the barks of four milky trees, peeled root of *Glycyrrhiza Glabra*, fibrous

root of *Andropogon Muricatus*, sandalwood, the herb *cynodon Dactylon* and the root of *Indigofera Tinctoria*, grind well and apply externally.

32. To destroy poison in the system, grind the ripe leaf of *Calotropis gigantea* and *asafoetida*, and with this held in the hand, close the mouth and nose of the patient for some time, so that the patient inhales the air incontact with this paste. Repeat the process thrice.

33.

RASAYANA:

a)

VYOSHADI:

Take of *Vyosha*, root of *Thakaram* (*Tabernaemontana coronaria*), root of *saussurea Lappa*, rhizome of *Nardostachys Jatamansi*, Rock-salt Gum storax, root of *ocimum sanctum* skinned root bark of *Hemidesmus Indica*, scraped tubers of *cyperus Rotundus*, Peeled root of *Glycyrrhiza Glabra*, *Asafoetida*, tubers of *Curcuma Longa*, root-bark of *Berberis Aristata*, berries of *Embelica Ribes*, and dry ripe seeds of *Elettaria cardamomum*—slice, bruise and grind well in sufficient quantity of the bark-juice of *Butea Frondosa* for two days, add the gum of *Butea Frondosa* ($\frac{1}{17}$ of the

total weight): Heat it in a water jacket till it becomes cooked. Keep this medicine in a vessel made of the horns of a cow, or in a cleaned cow-horn.

This Rasayana may be used as *Lepa*, *Pana*, *Nasya* and *Anjana*.

b) **DEVVADARVADI RASAYANA:**

Take of wood of *Cedrus Deodara*, tubers of *Curcuma Longa*, root-bark of *Berberis Aristata*, *Thakara root* (*Tabernoemontana corc-naria*), Peeled root of *Glycyrrhiza Glabra*, dry rhizome of *Acorus calamus*, 'stone-juice' Bitumen (*Girigandha*), Black Pepper, root of *Pongamia Glabra*, bark of *Acacia speciosa* (*mimosa sirisha*), root of *Calotropis gigantea* and *Pipli* (*Piper Longum*), may be prepared like the previous prescription and kept in cow'-horn. Use this similarly.

c) **SIREESHADI.**

Take of bark of *Acacia speciosa*, ripe seeds of *Elettaria cardamomum*, stick-lac, rhizome of *Nardostachys Jatamansi*, Gum-storax, Peeled root of *Glycyrrhiza Glabra*, root-bark of *Ipomoea Turpethum*, rock-salt, *Thryooshana*, seeds of *cucumis Trigonus*, root bark of *Ber-*

beris Aristata, dry tubers of curcuma Longa (Turmeric), and root of Rubia Manjishta may be prepared, kept in cow'-horn and used as the two previous cases.

The above *three* may also be used for fumigation i. e. smoking at the wounded part.

34. The following *four* prescriptions of Pills are usually kept very secret and handed down only to well-behaved disciples by their teachers. Generally the physicians must have these pills as well as any other kind of pills ready with them.

A Take the root of Narium coronarium (Tabernaemontana coronaria) which goes to the north (cardinal point) without the help of any weapon (iron) during the time of *Solar Eclipse*, "when the planet becomes more and more visible, *after the period of Eclipse has reached its acme.*" Slice this root and grind well in sufficient quantity of *Thandulambu* so that the pill-mass may be made into pills each as big as a seed of abrus Precatorius. Dry them in the shade and keep them in a clean bottle.

One pill administered internally is an effective antidote for poison.

B Take, without the help of iron, the *five* parts of *Acacia speciosa* (*Sireesha*), on the *fifth* day after the full moon. Slice, bruise and grind them into a pill-mass in cow's urine or goat's urine for *three* days. Make it into pills as before and dry them in the shade. This may be used as *Lepa*, *Pana*, *Nasya* and *Anjana*.

C Take equal parts of the dung of the calf (cow's) excreted by it for the first time after its birth, and *Saussurea Lappa*, grind well as in (B) above and use similarly.

D Take of the dry rhizome of *Acorus calamus*, *asafoetida*, bulb of *Allium Sativum* and *vyosha*, grind them in *Thandulambu* into a pill-mass, and make it into pills and use them as the previous ones.

E **BILVADI PILLS.**

For the method of preparation, and their effect *Vide* instructions given before.

F **HINGVADI PILLS.**

Take of *Asafoetida*, *Aswagandha* root (*wi-thania somnifera*), Rock-salt, the dung of she buffalo's calf excreted for the first time after

16*

its birth, Thrikatu bruise and grind well in the milky-juice of *Calotropis gigantea* for seven days into a pill-mass. Make it into pills and dry in the shade. Administer one pill in *Thandulambu* internally. If the patient vomits, the case is hopeless. If he does not, he will be cured.

35.

ANJANA

A Anjana no. 1 —Dasabeejanjana i. e the pill of the *ten* seeds for eyes:

Take the seeds of

Indigofera Tinctoria, *ocimum sanctum*, *jatropha montanna*, *Moringa Ptery-gosperma*, *Melia Azadirachta*, *Acacia speciosa* (i. e sirish), Black Pepper, *Mimusops Elingi*, *Abrus Precatorius*, and *Pongamia Glabra*—equal parts, each $1\frac{1}{2}$ drachm; zinc sulphate and *Sodii Biorax*, each $3\frac{1}{2}$ dr; Antimony black and Rock-salt each $1\frac{2}{3}$ dr; (total $21\frac{7}{8}$ dr.) grind well in the fruit juice of *Citrus Acida* firstly for 36 hours; and secondly in the leaf-juice of *ocimum sanctum* for another 36 hours into a pill-mass. Make it into small pills as big as a dry black-pepper, dry in the shade and keep in a clean bottle.

When the patient is in a swoon on account of Poison, a pill may be rubbed in the leaf-juice of *ocimum sanctum* and applied to both the eyes as *Anjana*. The patient will not only be awakened, but his poison also will be destroyed.

B

ANJANA No. 2.

Take Black-Pepper from the pepper vine that is grown on *Moringa Pterygosperma* and the seed of *Mimusops Elengi*, rub a few grains of each in the fruit-juice of citrus *Acida*. This may be applied into the eyes of those who fell into the hypnotic state by poison.

36.

DHOOPAS I. E. FUMIGATION OR SMOKING.

A. Take of Peacock-feather, seed of *sesamum Indicum*, dry tubers of *Curcuma Longa*, seed of cotton (*Gossypium Herbaceum*), equal parts, bruise, mix with the husk of paddy and set fire to this. The smoke arising may be applied to the wound i. e. the part bitten or stung.

B Take of the leaf of *Euphorbia Tirucalli*, the leaf of *Melia Azadirachta*, Hair (human), dry tubers of *Curcuma Longa* (Turmeric), bruise and mix with husk. Apply the smoke from this also, locally.

- C.** Take of the seeds of *Sesamum Indicum*, Rock-salt, feather of Cock and feather of pea-cock, bruise, and apply the smoke.
- D.** Take of the skin of deer, seeds of *sesamum Indicum*, Excreta of boar, and feather of pea-cock, bruise and use this for smoking.
- E.** Take of bone of cat, feather of pea-cock, *Trīkatu*, hair of mongoose, bruise, wet it with goat's milk, and use it for fumigation.
- F.** Take of feather of pea-cock, dry rhizome of *Acorus calamus*, asafoetida, bulb of *Allium Sativum*, Black-pepper and crushed bone of mongoose, and use this for smoking:

Note:—The medicines mentioned under 33 (a), (b) and (c) *supra* may also be used as *Dhoopas*.

CHAPTER 12.

CERTAIN OTHER PRESCRIPTIONS.

Medicated oils and ghees; medicated butter-milk and *Leha*:

Medicated oils for bath: to be prepared in Svarasa:

1. In the juice of cynodon Dactylon and the skinned stem of cocculus cordifolius, mix gingeli oil and *Kalka* prepared of the peeled root of Glycyrrhiza Glabra, sandalwood, dry tubers of curcuma longa, and the root-bark of Berberis Aristata. The oil may be strained when the *Kalka* is heated to *Kharapaka*. This, when smeared over the whole body, acts as an antidote for poisons.
2. In the leaf-juice of Eclipta Erecta mix gingeli oil and the *Kalka* prepared of the peeled root of Glycyrrhiza Glabra, root of withania somnifera, and the dry rhizome of Acorus calamus. strain and use the oil as before.
3. In the juices of the herb cardiospermum Helicacabum and the leaf of Indigofera Tinctoria, Gingeli oil can be prepared with the *Kalka* made of the following:— Fibrous root of Andropogon Muricatus, wood of Cedrus Deodar, sandalwood, peeled root of Glycyrrhiza Glabra, skinned root bark of Hemidesmus Indicus, root of *Takaram* (Tabernaemontanna coronaria), dry tubers of curcuma longa, scraped root of cyperus Rotundus, *Phalatraya*,

and root of *saussurea lappa*: This is an antidote for all poisons.

4. In the juices of *cynodon dactylon* and the barks of the *four* milky trees, with *Kalak* made of the skinned root-bark of *Hemidesmus Indicus*, sandalwood, roots of *Indigofera Tinctoria* and of *Amaranthus Polygamus*, gingeli oil can be prepared.

In the juice of the peeled stem of *cocculus cordifolius* and *Dasapushpa*, gingeli oil can be prepared with *Kalka* made of *Trikatu*, roots of *Aristolochia Indica*, of *cissampelos Periera*, dry tubers of *curcuma longa*, root-bark of *Berberis Aristata*, sandalwood, skinned root-bark of *Hemidesmus Indicus*, scraped bulbous root of *cyperus Rotundus*, root of *vanda Roxburghii*, and rhizome of *Nardostachys Jata-mansi*.

MEDICATED OILS TO BE PREPARED IN DECOCTION.

- 6 Take of the peeled stem of *cocculus cordifolius*, Bark of *symplocos racemosa*, peeled root of *Aegle Marmelos*, and fruit of *Emblica officinalis* — 3 *palams* each, and prepare a decoction in 12 *Dravaprastha* ($4\frac{4}{5}$ gallons) of

water by boiling away the water and reducing it to $\frac{1}{4}$ Mix with it gingeli oil, juice of *Eclipta Erecta*, juice of *cynodon Dactylon* and milk, each $3\frac{1}{2}$ pints. For *Kalka*, take of sandalwood, root of *Andropogon muricatus*, root of *Takaram*, *cedrus deodar*, rhizome of *Nardostachys Jatamansi*, root of *saussurea lappa*, root of *Rubia Manjishta*, camphor (Borneo), root of *withania somnifera*, root of *Pavonia odorata*, dry seeds of *Elettaria Cardamomum*, *Pathimukam* (fruit of *prunus Padm*), peeled root of *Glycyrrhiza Glabra*, and leaves of *Basella Alba*, Strain the oil in the usual way.

This oil, when rubbed on the body, acts as an antidote for the poison of snakes, insects, rats, spider and *Godha* a species in the reptile family (mountain lizard) and also for plant poison.

7. Take of sandalwood and the peeled root of *Glycyrrhiza Glabra* (each 8 palams and boil them in $6\frac{2}{3}$ gallons of water; and reduce it to $\frac{1}{4}$) Mix in it gingeli oil along with the *Kalka* made of sandalwood, root of *Glycyrrhiza Glabra*, skinned root-bark of *Hemidesmus Indicus*,

(each 8 drachm); strain the oil when the *Kalka* is heated to *kharapaka*.

This oil is very beneficial in all chronic poisons, especially in viper-poison.

MEDICATED GHEE TO BE PREPARED IN SWARASA.

8. Take of fresh-leaf of *Indigofera tinctoria* and the herb *Amaranthus polygamus*, each *two palams*, bruise and squeeze the juice thrice in $3\frac{1}{2}$ pints of water. Filter the liquid through a cloth seive and mix with it one *Kuduba* (16 oz.) of ghee, and the *Kalka* made of the roots of the above herbs, each $3\frac{3}{4}$ drachm. Boil the water away and strain the ghee when the *Kalka* is heated to *Madhyamapaka*.

Half a tola of this ghee taken internally in the morning is an antidote for all poisons. Or it may be taken along with the first ball of cooked rice during meal time.

9. Take *four palams* of the herb *Herpestis Monniera*, bruise and squeeze thrice in $3\frac{1}{2}$ pints of water and filter it. With this mix *one kuduba* of ghee along-with the *kalka* made of Bulb of *Allium sativum*, cumin seed—small variety, and big variety; rock-salt, root of

Aristolochia Indica, root of cissampelos periera, dry tubers of curcuma longa, root-bark of berberis Aristata, dry rhizome of Acorus calamus, *Trikatu*, root of Fagonia Arabic, (Tragia involucrata), dry rhizome of Helleborus Niger, tuberous root of Aconitum Heterophyllum, fruit of chebulic Myrobalan, Asafoetida and sandalwood—each 24 grains—boil the water away, and strain the ghee when the *kalka* is heated to *madhyamapaka*.

This ghee, when taken internally as in the previous case, is not only beneficial in all poisons, but it cures stomach-ache, want of appetite and various ailments caused by round worm in children.

MEDICATED GHEE TO BE PREPARED IN DECOCTION:

10. Take of root of Ophiorrhiza Mungos, and root of Aristalochia Indica, each *two palams*, slice, bruise and boil in $1\frac{3}{5}$ gallons of water. Boil the water away till it is reduced to $\frac{1}{4}$. Mix with it *one Kuduba* of ghee along with the *Kalka* made of *Trikatu* (total 10 drachms) At *Madhyamapaka* strain the ghee. This, when taken internally, is an antidote for all kinds of Poisons.

11. Take of root of *Indigofera Tinctoria*, *two palams*, Bark of Nim (*melia Azadirachta*), one palam, leaf of *Pongamia Glabra*, one palam:—cut, bruise, and boil in $1\frac{3}{5}$ gallons of water till the latter is reduced to $\frac{1}{4}$. Mix with it one Kuduba (16 oz) of ghee and the *Kalka* made of the following:—root of *Indigofera Tinctoria*, dry rhizome of *Acorus calamus*, *Trikatu*, dry tubers of *Curcuma Longa*, root-bark of *Berberis Aristata*, Peeled root of *Glycyrrhiza Glabra*, seeds of *Holarrhena Antidysenterica*, rock-salt, root of *withania somnifera*, root of *Takaram*, sandalwood, scraped bulbous root of *cyperus Rotundus*, root of *cissampelos Pereira*, and root of *Aristolochia Indica* each $\frac{5}{8}$ drachm,

At *madhyamapaka* strain the ghee. Administered internally, it is an effective antidote for all kinds of poisons -- of snake, rat etc, though it be virulent. This nectar-like ghee is known as *Neeleeghritha*.

12. Take of root of *cissampelos Pereira*, root-bark of *Berberis Aristata*, stalk of *Trichosanthes Dioica*, herb *Mollugo cerviana*, herb *Herpestis monniera*, bark of Nim (*melia Azadi-*

rachta), (Tragia involucrata) root of Fagonia Arabica, and dry rhizome of Helleborus Niger each *half a palam* and prepare a decoction in $1\frac{3}{5}$ gallons of water till the water is reduced to $\frac{1}{4}$ Mix ghee (16 oz) and Kalka made of sandalwood, root of cyperus Rotundus, root of Gentiana Chirayta, Long Pepper, seeds of Holarrhena Antidysenterica, Herpestis monniera each $1\frac{1}{2}$ drachm. Strain the ghee as before. Taken internally, it destroys all kinds of poisons; it is specially beneficial in viper (mandali) poison in that it cures the swelling, and wound, removes the impurity in the blood; and stops the flow of liquid with foul odour.

13. In the decoction made of the root of Indigofera Tinctoria, add an equal quantity of the leaf-juice of the same plant. Mix with it ghee equal to $\frac{1}{4}$ of the liquid mixture along with Kalka made of the root of Indigofera Tinctoria. Boil away the water when the Kalka is heated to intermediate stage, strain the ghee through a cloth.

This is also very effective in *all poisons*, especially in that which deranges *Pitta* e. g. mandali Poison.

LEHAS

Lehas are jelly-like electuary. They are licked and eaten. Medicines are administered in the form of *Lehas* also.

- a) Take of leaves of *Indigofera Tinctoria* and the herb *Amaranthus Polygamus* each *two palams*, bruise and squeeze the juice in one Kuduba (16 oz.) of water and filter the liquid through cloth. Mix with it *four palams* of sugar and boil until it forms a syrup. Also mix with this the Choorna (powder) made of *Trikatu*, root of *Takaram* and rock salt (total two palams) so as to form an electuary. This may be licked and eaten *ad libitum*.
- b) The above electuary may be made in the juice of *Dasapushpa* also.
- c) Take of the roots of *Indigofera Tinctoria*, *Cissampelos Periera* and *Aristalochia Indica*, and the herb *Herspestis monniera* —*half palam* each and boil in two *Dravaprasthas* of water till the water is reduced to $\frac{1}{8}$, Strain the decoction, mix with it *four palams* of sugar and boil it to a syrup. To this add an ounce of honey and *Choorna* made of rhizome of *Acorus*

calamus, sandalwood, *Trikatu*, root of withania somnifera, *Trijataka*, root of cyperus Rotundus, Rock-salt and asafoetida—each $2\frac{1}{2}$ drachm (total two palams). This, taken *ad libitum*, is an antidote for the poison of snakes, and rats, and it also cures the disorders in the abdomen

For bowel complaints, such as dysentery and pain, the medicines mentioned above (under Lehas) may be used to prepare medicated butter-milk. The butter-milk must be made of goat's milk; that of cow's or she-buffalo's should never be used.

The proportion of butter-milk to medicine is as 8 : 1, and water 4 times the milk must be mixed e.g., *four palams* of medicine one *Kuduba* (16 oz) of butter milk and *four* Kudubas of water. Boil away the water, and the cooked medicines must be well pounded in the butter-milk. 6 oz. of this butter milk may be administered at a time or it may be taken along with food.

	BOTANICAL NAME	SANSKRIT	HINDI	MALAYALAM	ENGLISH	PARTS USED
1	Abrus Precatorius	Gunja	Rati, Gunja	Kunni	Indian Liquorice	Seed, leaf
2	Acacia speciosa; A. Sirish	Sireesha	Siris	Nenmeni Vaka	Sireesha tree	5 parts
3	Acalypha Indica	Manjari	Kupi	Kuppamanjal	Indian Acalypha	Whole herb
4	Achyranthus Aspera	Apamarga	Latchiya	Cherukatalati	Rough chaff tree	do
5	Aconitum Ferox	Visha; Vatsanabha	Mithazahar	Valsanabhi	Indian Aconite	The dried tuberous root
6	Aconitum Heterophyllum	Athivisha	Atis	Athivitayam	Indian Aties	do
7	Acorus calamus; A. Odoratus	Vacha	Bach; Gor	Vayamp	Sweet flag	The dried rhizome
8	Aegle Marmelos	Bilva; Maloora	Bel	Koovala	Bel, Bengal quince	Peeled root
8 A	A-erus Lanata			Cheroola		The herb
9	Alangium Decapetalum	Ankola	Akola; Dhera	Ankolam	Sage-leaved Alangium	Root; bark
10	Allium Sativum	Lesuna	Lasum	Vellulli	Garlic	The bulb
11	Aloe Litoralis	Kanya; Kumari	Chhotakanvar	Kattavazha	Small aloe	The leaf
12	Amaranthus Polygamus	Thanduleeyaka	Sarvari	Cherucheera	Amaranthus	Herb
13	Andropogon Muricatus	Useera (உசீர)	Khas Bena	Ramacham	Cuscut grass	Fibrous root
14	Anthocephalus Cadamba	Kadumba	Kadamba	Katamp	Wild cinchona	Bark, leaves
15	Areca Catachii	Pooga; Kramuka	Supari	Kazhung	Betel-nut palm	Bark, nut
16	Aristolochia Indica	Vishavega	Isharmul Ruhimula	Karalaka	Indian Birthwort	Root, leaf
17	Artocarpus Integrifolia	Panasa	Katahara	Pilavu	Indian jack tree	Bark, leaf
18	Asparagus Racemosa	Satamooli	Sataware	Satavari		Root
19	Balsamodendron Mukulon B. Agallocha	Guggul	Gugul	Gulgulu	Indian Bdellium	The gum
20	Basella Alba		Poyi	Pachila	Malabar night shade	Leaf
21	Beninkasa Cerifera	Koosmunda	Golkaddu	Kumbalam	white gourd melon	Fruit, stem
22	Berberis Aristata	Daruharidra	Chitra; Rasant	Maramanjal	Tree Turmeric	Root-bark
23	Bergera Koenigii	Surabhinimba	Karaypak	Karu veppu	Curry-leaf tree	Leaf, bark
24	Berhavia Diffusa	Punarnava	Beshakapore	Thamizhama	Spreading hogweed	Root
25	Borassus Flabelliformis	Thala	Tari	Pana	Palmyra tree	Leaf
26	Brassica Nigra	Sarshapa	Kalo-rai	Katuku	Black mustard	The seeds
27	Butea Frondosa	Palasa	Palash	Plasu	Bastard Teak	Bark, leaf
28	Caesalpinia Bonduie	Kuborakshi	Sagar-ghota	Kazhanji	Fever-rot	Seed
29	Cajanus Indicus	Adhaki	Tor	Thuvava	Cadjan Pea	Seed
30	Calotropis Gigantea	Sivamalli; Arka	Madar	Erikku	Gigantic swallow-wort	Leaf; hairs on seed
31	Calotropis Procera			Vella-Erikku		
32	Canavis Sativa; C. Indica	Vijaya	Gunja	Kanjavu	Indian Hemp	Leaf
33	Carcospermum Helicacabum	Indravalli	Kanphata	Uzhinja	Balloon Vine	The whole herb
34	Cassia Fistula	Nripadruma	Amaltas	Konna	Purgine Cassia	Bark, root
35	Cassia sophora	Punnataka	Bas-ki-kasunda	Ponnam Thakara	Senna Sophora	Leaf; seed
36	Cedrus Deodara	Devadaru	Deodar	Devatharam	Himalayan Cedar	The wood

	BOTANICAL NAME	SANSKRIT	HINDI	MALAYALAM	ENGLISH	PARTS USED
37	Cephalandra Indica	Mathignee	Kanduri	Kova		Fruit ; leaf
38	Cissampelos Pereira	Patha (पथ) (01100)	Harjori	Patackizhang	Velvet-leaf	Root
39	Citrullus colocynthis	Ikshvaki		Pechura	Indian wild gourd	Whole herb
40	Citrus Acida	Jambeera	Limu	Cheru Narakam	Acid lime	Leaf; fruit
41	Cocculus cordifolius	Guloochi	Gulanchar	Chittamritthu	Heart-leaved moon-seed	The peeled stem
42	Coriandrum Sativum	Dhanyaka	Dhania	Kothampalari	Coriandar	Fruit
43	Crotalaria Verucosa	Mathirghathi		Kilukiluppa		Root
44	Cucumis Sativus		Kankri	Vellari	Common Cucumber	Fruit
45	Cucumis Trigonus	Visala	Bislanbi	Kattu Vellari	Bitter Gourd	Fruit
46	Curculigo (orchioides)	Bhoomitnala	Kali-musali	Nilappana	Black musali	Tuberous root
47	Curcuma Longa	Rajani	Haldi	Manjal	Turmeric	The tubers or rhizome
48	Cynodon Dactylon	Doorva	Durba	Karukappullu	Couch Grass	The whole herb
49	Cyperus Rotundus	Mustha		Moththanga		The bulbous root-skin scraped
50	Damia Extensa		Sagovani	Velipparuthi		Whole herb
51	Datura Alba or Stramonium	Unmaththa	Dhatoora	Ummaththam	Thornapple	Fruit, leaf
52	Delphinium Denuatum	Nirvishee	Nirbishi	Nirvishi		Tubers; seed
53	Dolichos Biflorus	Kulaththa	Koolthu	Muthira	Horse-grass plant	Seed
54	Eclipta Erecta	Bhringa	Bungrah Mochrand	Kayyunn		The whole herb
55	Elephantopus Scaber	Gojhya	Gobhi	Anayati	Prickly-leaved Elephants' foot	Root
56	Elettaria Cardamomum	Ela ; Thruti	Chhoti Elachi	Elattari	Lesser Cardamom	The dried ripe seeds
57	Eleusine Coracana	Soma	Ragi	Muttari	Ragi	Grain
58	Embelia Ribes	Vilanga	Baberrang	Veezhallari		Seed
59	Embelia Officinalis	Dhatri	Amlika	Nelli	Embelia myrobalan	Fruit, bark
60	Erythrina Indica	Kimsuka		Murikku	Mochi-wood	Leaf, bark
61	Euphorbia Tirucalli	Dugdhika	Barki-Thohar	Kalli-Tirukalli	Milk-hedge	Leaf
62	Evolvulus Alsinioides	Vishnukranta		Vishnukranti		Whole herb
63	Fagonia Arabica	Dusparsa	Jaransa	Kotuthoova	Camel fodders	Root
64	Ferula Asafoetida	Ramata ; Hingu	Hing	Kayam	Asafoetida	Gum
65	Ficus Benghalensis	Vata	Vada	Peral	Banyan tree	Bark
66	Ficus Glomerata	Udumbara	Gular	Aththi	Cluster-fig	Bark
67	Ficus Religiosa	Aswatta	Pipal	Arnyal	Sacred-fig	Bark
68	Ficus Tjakela or F. Vemosa			Itti	Waved-leaved fig tree	Bark
69	Galega Purpurea; Tephrosia P.	Sarapumkha	Sarphenka	Kozhinjal	Purple Tephrosia	Root
70	Gendarussa Vulgaris	Neelanirgundi	Kala-Bashimb	Karunochchi		Leaf, root
71	Gentiana Chirayta			Puttarichebunda		Root
72	Gloriosa Superba	Langali	Carihari	Mettonni	Superb Lily	Root

BOTANICAL NAME	SANSKRIT	HINDI	MALAYALAM	ENGLISH	PARTS USED
Glycyrrhiza Glabra	Maduka ; Yashti	Mithilakdi	Erattimaduram	Liquorice	Peeled root
Gmelina Arborea	Kasmari	Gambhara	Kumizhu		Root, bark, fruit
Gossypium Herbaceum	Karpasa	Kapas	Paruthi	Indian Cotton plant	Leaves
Gynandropsis Pentaphylla	Aranya Sarshapa		Vela		Whole herb
Heliotropium Indicum	Sreehastini	Hatta-juri	Thekkata	Heliotrope	The herb
Helleborus Niger	Katurohini	Kalikutuki	Katukarohini	Black Hellebore	The dried root/leaves
Hemidesmus Indicus	Sariba	Kalisar	Nannari or Naruneendi	Indian Sarasaparilla	rhizome
Herpestis Monniera	Bramhi	Barambhi	Bramhi	me-leaved Gratiola	Skinned root-bark
Hibiscus Populnea or Thespadia Populnea			Poovaras ; Pooparattu		The herb
Holoptelia Integrifolia		Parus Pipal	Aval	India tree	Bark
Indigofera Aspalathoides		Paori	Manali		Bark ; tender leaf
Indigofera Tinctoria or Indica	Neelee	Ni	Neela Amari	Indigo	Whole herb
Ipomoea Turpethum	Trivrit	Pihori ; Nakpatru	Trikolpa Kon	Ipomoea (Jalap)	Root-bark
Ixora Coccinea	Rakthatha	Rangan	Thekchi	Red Geranium	Root
Jasminum Grandiflorum	Malathi ; Jathree	Jai	Pichchakam	White Jasmine	Leaf
Jatropha Montanna		Hakni	Nagadanti		Root, seed
Leucus Aspera	Drona ; Vaikuntha	Guma Madhupati	Poo-thumba		Leaf
Luffa Echinata	Kosa'haki	Kurur lata	Putulpeeran		Whole herb
Mallotus Philippinensis	Kanpillam	Kamala	Kampi-ppala		Root
Mangifera Indica	Anra ; Chootha	Anra	Mavu		Bark
Melia Azadirachta	Nimba ; Arishta	Nim	Yepu		Root, bark, leaf
Mimusops Elengi	Bakula	Mulsari	Elunji		Seed
Mollugo Cerviana	Parpataka	Taph-Jhad	Parpataka		Whole herb
Momordica Charantina	Karavalli	Kareli	Kappa		Fruit
Moringa Hyperanthera	Sigru	Sahinjan	Muringa		Bark, root
Mucuna Pruriens	Atmagupta	Kavach	Naykuru		Seed
Musa Sapientum or M. Paradisiaca	Kadali	Kela	Kadali		Corm
Myristica Fragrans	Jatephala	Jathal	Jaticka		The dried seed — deprived of testa
Nardostachys Jatamansi	Jatamansi	Jatamashi	Jatam		The rhizome
Nelumbium Speciosum	Mrinala, Kamala	Kanwal	Thalass		The tubers
Nicotiana Tabacum	Dhoomapatra	Tambaku			Leaf
Ocimum Sanctum	Surasa	Kala-tulasi			Whole herb
Ophiorrhiza Mungos	Sarpakshi	Sarabati			Root
Oroxylum Indicum	Deergha Vrintha	Soupatha			Peeled root

	BOTANICAL NAME	SANSKRIT	HINDI	MALAYALAM	ENGLISH	PARTS USED
107	Oryza Sativa	Vreehi	Chaval	Nellu (Ari)	Rice	Grain ; Husk
108	Pandanus Odoratissimus	Kethaki	Keora	Poo-kytha	Fragrant Screw-pine	Bract (Spathe)
109	Panicum Italicum	Syama	Samak	Thica	Italian Millet	Grain
110	Papaver Somniferum	Ahiphetta	Afim	Karuppu; Aveen	Opium	Gum
111	Pavonia Odorata	Thoya	Sugandha vala	Iruveli		Whole herb
112	Phaseolus Mungo	Mudga	Moong	Cherupayar	Green gram	Seed
113	Phaseolus Roxburgii	Masha	Udid	Uzhunnu		Seed
114	Physalis Minima			Nattanaatunga		Root
115	Pinus Longifolia	Sarala	Saral	Charala	The long-leaved pine	Wood
116	Piper Betel or Chavica Betel	Tbamb	Pan	Vettilackoti	Betel-leaf Pepper	Leaf
117	Piper Longum	Pippali	Pipili	Thippali	Long Pepper	Fruit
118	Piper Nigrum	Marich	Kali-mirich	Kurumuhku	Black Pepper	Fruit
119	Plumbago Rosea	Raktac	Lal-Chitrak	Kotuveli	Rose-colored Leadwort	Rhizome (purified)
120	Pongamia Glabra	Karanj	Korang	Ungu; Pongu	Indian Beech	All parts
121	Ricinis Communis	Eranda	Arand	Amanachu	Castor-oil plant	Root
122	Rubia Manjishta (Cordifolia)	Manjis	Manjit	Manjatti	The Indian madder	Root
123	Saccharum Officinarum	Iksbu	Ganna	Karimpu	Sugar-cane	Stem
124	Santalum Album	Ch	Safed Saudal	Chandanam	White Sandalwood tree	Wood
125	Saussurea Lappa	K	Kust	Kottam	The Costus	Root
126	Semecarpus Anacardium	B	Bhela	Chermanam	The marking-nut tree	
127	Sesamum Indicum		Til	Ellu	Gingili-oil plant	Seed
128	Sida Cordifolia		Barier ; Khareti	Kurunthotti	Country Mallow	Root
129	Solanum Ferox			Vellottu Vazhuthini		Root
130	Solanum Indicum		Brihat	Cheru Vazhuthini	Indian Night shade	Root
131	Solanum Jacquini		Kateli	Vellottu Vazuthini	Wild egg plant	Root
132	Spondias Mangifera		Ambada	Ampazham	Hog-plum	Bark
133	Stercospermum Chelo		Par-Padra	Pathiri		Peeled root
134	Strychnos Nux-Vom		ahar	Kanjirar	The Nux-vomica tree	Root
135	Symplocos Racemosa		odhra	Pachchotti	The Lodh tree	Bark
136	Tabernaemontana Co		endni	Nandiar	Wax-flower plant	Root
137	Tamarindus Indica		li	Puli	The Tamarind tree	Bark ; root ; leaf
138	Terminalia Beleric		irah	Thanni	Beleric Myrobalans	Fruit, bark
139	Terminalia Chebu			Katukka	Chebulic myrobalan	
					Ink-nut tree	Fruit
140	Tribulus Terrestr			Nerinni	Small caltrops	Fruit ; root
141	Vanda Roxburghii			Aratta		Root
142	Ventilago Madras			Vempatt		Root
143	Vernonia Cinerea			Poovannuruntala	Red Creeper	Whole herb
144	Vitis Vinifera			Munthianga	Grape-Vine	Fruit
145	Zingiber Officinale			Chukkuchinchi	Dry Ginger	Rhizome